

The VoIP evolution

Business software will gain advanced VoIP elements in the future, experts predict at the Internet Telephony Conference and Expo. **PAGE 10.**

Clear Choice Test: E-mail archiving

Primera Technology's OptiVault replaces tapes with DVD media. **PAGE 47.**



Wireless spending spree

Investors are pouring money into wireless network start-ups at a rapid rate, according to the latest venture capital survey. **PAGE 12.**

NETWORKWORLD

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WiderNet

ID theft, the sequel

Hollywood takes another hack at genre in 'Firewall'.

BY CARA GARRETSON

Harrison Ford is ticked off again. But not because the bad guys have hijacked Air Force One or kidnapped his wife from a Paris hotel room; this time they've swiped his identity to break into the bank where he works and steal millions of dollars.

Warner Bros. Pictures on Feb. 10 will release "Firewall," the latest film to focus on an issue that over the past year has come front and center in the public's consciousness — identity theft. Playing off everyone's fear of having a credit card number stolen, "Firewall" takes it to the extreme, pitting good corporate citizen Jack Stanfield (Ford) against a technology-laden thief with a British accent,



Actor Harrison Ford portrays a victim of identity theft in the new movie "Firewall".

See Firewall, page 56

Vendors feel heat to cool hardware

BY JENNIFER MEARS AND DENI CONNOR

As data center equipment gets smaller and more robust, figuring out how to power and cool it adequately is becoming an increasingly major challenge.

This month, a flurry of activity focusing on IT heat and power demands — including new products from Egenera and HP, and conferences sponsored by data center association AFCOM and the Environmental Protection Agency — highlight the need for IT managers to stay on top of industry trends as they plan their next-generation data centers.

"The issues of heat and power are critical," says Eric French, network systems manager at the Greater Baltimore Medical Center, which has seen its energy operating expenses increase by more than \$1.5 million per year during the past two years. "We don't want to run into a crunch situation ... and with the price of energy, we want to use as little as possible."

Although the basic assumption for data center design used to be that a typical rack of servers would draw 2 kilowatts of power and give off an equivalent amount of heat, analysts say that demand is now around 8 or 10 kilowatts. Fully loaded racks could push the power envelope to more than 20 kilowatts — hotter than two household ovens — especially with extremely dense blade servers.

And it's not just servers. American Power Conversion, which sells power and cooling devices for data centers, notes that today's communications equipment, along with new servers, generate about 10 times the heat per square foot as their predecessors did 10 years ago. The Cisco CRS-1 Carrier Routing System, for example, creates a heat load of 15 to nearly 17 kilowatts of heat per rack.

Technologies such as lower-power chips, multi-core

See Data center, page 16

Lotus touts role of blogs, wikis and feeds

BY JOHN FONTANA

ORLANDO — IBM/Lotus plans to expand its corporate collaboration tools by adding social relationship, behavior mapping and alerting technology that lets users easily share ideas, data, research and corporate knowledge.

Customers are hoping that the

tools can help revolutionize the way their organizations communicate, share data, and analyze information and work patterns. The goal is to help improve collaboration.

At its annual Lotusphere conference last week, IBM/Lotus showed off plans to infuse its entire col-

laborative software lineup with social networking technology such as blogs, wikis and syndication feeds. While those tools are changing the face of the Internet, Lotus is adapting the concepts and features for internal corporate use in much the same way instant messaging was adapted for real-time communication.

IBM/Lotus is developing a number of social networking plug-ins to enhance its IM program, Same-time 7.5 (expected to ship mid-year), so users can track down experts, conduct polls, create instant discussion forums and build searchable question-and-answer archives. The release date

See Lotusphere, page 56

GUIDE TO: Wireless/mobility

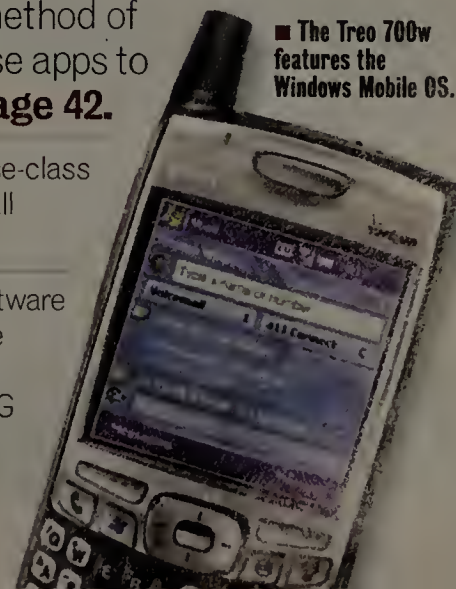
Make way for 3G

New 3G cellular networks will challenge Wi-Fi as the preferred method of delivering enterprise apps to mobile workers. **Page 42.**

Device envy: Enterprise-class 3G devices will make it all possible. **Page 43.**

Appetite for apps: Software vendors and carriers are stepping up with new services optimized for 3G networks. **Page 44.**

■ The Treo 700w features the Windows Mobile OS.



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NETWORKWORLD

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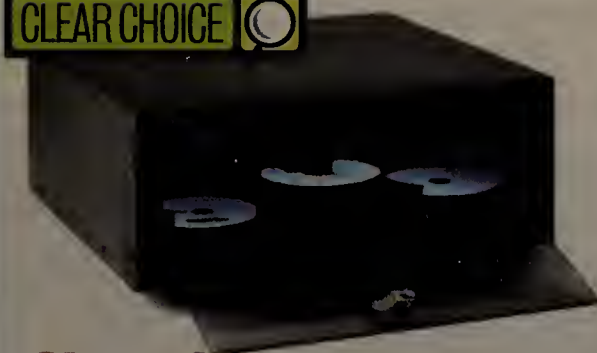
Make way for 3G:

New 3G cellular networks from leading carriers Cingular, Verizon and Sprint Nextel will challenge Wi-Fi as the preferred method of delivering enterprise apps to mobile workers. **Page 42.**

Device envy: Enterprise-class 3G devices from vendors such as Motorola, Palm, Nokia and Research in Motion will make it all possible. And don't forget Microsoft. **Page 43.**

Appetite for apps: Software vendors and carriers are stepping up with new services optimized for 3G networks. One example is location-based services. **Page 44.**

NETWORKWORLD CLEAR CHOICE



Clear Choice Test: E-mail archiving

Primera Technology's OptiVault replaces traditional magnetic tapes with DVD media. Tester Joel Snyder says the product does a great job at backup, but might not satisfy all your regulatory requirements for e-mail archiving. **Page 47.**

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Network World ITVideo: Tough year for Oracle?

Industry analyst Curt Monash explains what 2006 will mean for the database giant — and what software trends to watch. **DocFinder: 1930**

Forum: The case of the sneaky teenager

Help desk guru Ron Nutter came up with some technical ideas for a father whose teenage daughter was going behind his back and using a neighbor's wireless connection to get online late at night. Readers offer

more tips — including simply talking to the kid. **DocFinder: 1931**

Gibbsblog: Timesink

Columnist Mark Gibbs discovers a hypnotic Japanese site that will cause you to ignore everything else. Do you dare look? **DocFinder: 1932**

Compendium: It's just a box, right?

Sure, it's just a server, but it's one of the oldest at our Web server farm — or was, until it got decommissioned last week. Executive Online Editor Adam Gaffin remembers it. **DocFinder: 1933**

Online help and advice

VoIP

Technology Editor Sandra Gittlen and her readers discuss whether VoIP in the home is ready for prime time. **DocFinder: 1935**

Skype conferencing upgrade

Columnist James Gaskin looks at a new offering from Vapps that could let Skype users hold large teleconferences. **DocFinder: 1936**

Getting close to data that's beyond the data center walls

Mike Karp agrees IT shops do a good job at storing data in the data center, but what about all that info residing on user desktops and laptops? **DocFinder: 1937**

Got a question?

Post it in our forums and get help. We've got all the key enterprise topics covered. Free registration is required (helps keep the spammers at bay and lets you get notification of replies to your posts). **DocFinder: 1938**

Seminars and events

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NEWSbits

Cisco VPN gear vulnerable to DoS

■ Organizations running certain Cisco VPN gear may be susceptible to a remote denial-of-service attack that could knock out network connections for teleworkers or traveling employees accessing a corporate network through the Internet. A flaw in the Cisco VPN 3000 Concentrator could cause the device to reload or drop user connections if an attacker sends a specially crafted HTTP packet to the device, the vendor says. A software upgrade is required to avoid the vulnerability, and several workarounds can be used to thwart potential attacks. Cisco VPN 3000 concentrators are devices that terminate encrypted connections for remote users accessing a network via the Internet. VPN 3000 concentrators running Version 4.7.0 through 4.7.2.A of the devices' software are affected by this vulnerability, Cisco says. Software prior to the 4.7 release are safe.

ChoicePoint to pay fine for breach

■ ChoicePoint, the data broker that set off a national debate after disclosing a data breach early in 2005, will pay \$15 million in fines and other penalties for lax security standards, the Federal Trade Commission announced last week. ChoicePoint's \$10 million fine is the largest civil fine in the FTC's history, the FTC said. In a settlement with the FTC, the company also will set up a \$5 million fund to aid victims of identity theft that resulted from the data breach, and will implement new security measures and have an independent auditor review its security every other year until 2026. ChoicePoint said it has taken several steps to improve security since the data breach was announced, including the hiring of an independent credentialing, compliance and privacy officer. The company also has stopped selling products containing sensitive personal information in some markets, it said.

AT&T, Avaya link up on VoIP effort

■ AT&T and Avaya have launched an alliance to migrate businesses to VoIP. Using Avaya gear to run VoIP traffic over AT&T's IP backbone, the companies hope to smooth the way for customers who want to use VoIP in their businesses but also want to do so with a managed service. While AT&T says its services

{quote of the week}
{quote of the week}
{quote of the week}

"We'll point out that there are a lot of things that are not illegal but may be unscrupulous."

John Palfrey, professor of Internet law at Harvard and co-director of the newly formed "The Stop Badware Coalition"

can interoperate with customer-site gear from other vendors, this alliance offers management of the VoIP network down to the handset. AT&T supports Avaya's Communications Manager and IP Office, among other products, with its IP Telephony and LAN Services. Customers can outsource entire VoIP migration projects to AT&T including design, installation and ongoing upkeep. While Avaya gear may be part of the service, customers only deal directly with AT&T.

CA names Barrenechea CTO

■ CA is shuffling its executive ranks, naming technology strategist Mark Barrenechea as its new CTO. Barrenechea joined CA in 2003 after holding several executive positions at Oracle. He initially served as CA's head of product development before moving last year to the newly created position of executive vice president of technology strategy and chief technology architect. Barrenechea has been a highly visible spokesman for CA, commenting often on industry trends and CA's business strategy. Barrenechea will continue reporting directly to CEO John Swainson, and will remain in charge of CA's technology strategy and product architecture. His duties also will include supervising a research group that focuses on emerging technologies, such as RFID, and coordinates with academic researchers. CA's

TheGoodTheBadTheUgly



< Google gesture. The search engine company's CEO, Eric Schmidt, and co-founders, Sergey Brin and Larry Page, will each be paid salaries of \$1 this year, the same as last year. They probably will find a way to make ends meet, though. Brin and Page, for example, were listed among a tie for 55th place on Forbes' list of the world's richest people last year at \$7.2 billion each, due largely to their Google stock holdings.

Cell phone trouble. Three new malicious programs are hitting certain mobile phones, anti-virus companies have warned, though they said the infection rate is low. The Trojan horses (dubbed Bootton.E, Pbstealer.D and Sendtool.A) spread via Bluetooth or multimedia messages and can affect phones running the Symbian operating system.

An Ebbers of its own? The United States has Bernie Ebbers and Joe Nacchio, former telecom leaders disgraced in the wake of securities fraud charges (Nacchio's fate remains to be determined). Japan has Takafumi Horie, CEO of Internet portal operator Livedoor, who was arrested last week for violations of Japan's Securities and Exchange Law. The arrest came a week after prosecutors raided the head offices of Livedoor and several affiliated companies.

former CTO, Yogesh Gupta, is now CA's senior vice president of business development.

Cybercrime worries take toll

■ According to an IBM-sponsored survey of 700 participants who have Internet access at work or home, a growing fear about cybercrime is affecting how they engage in e-commerce online or by phone. It's also keeping some from accessing wireless LAN networks in public locales. Half the respondents say they don't use shared wireless networks in places such as coffee shops or airports because of concern about cybercrime. Almost three in 10 have stopped reading credit or debit card information over the phone, and 18% have stopped paying bills online. Sixteen percent have stopped playing online games.

3Com names top executive

■ 3Com has tapped a new president and CEO, R. Scott Murray, who will take over immediately for retiring chief executive Bruce Claflin. Murray was formerly CEO of Modus Media International, a provider of hosted supply-chain management services. Murray also will take over Claflin's role as chairman of the Huawei Technologies-3Com joint venture, through which 3Com produces many of its large-scale enterprise products for the U.S. market. Claflin, who announced his retirement plans Jan. 11, had served as 3Com's CEO and president since 2000. He led the network vendor through several shifts in its enterprise strategy, an exit from the carrier market, a joint venture with Chinese network-gear maker Huawei, and the acquisition of IPS vendor TippingPoint. 3Com is giving Claflin a \$3.3 million severance package, the equivalent of two years of his base pay and projected bonuses.

COMPENDIUM

AT&T patents emoticons :-)

OK, the patent is for talking emoticons that read text messages, but still. Plus, it seems similar to other patents, including one issued to Nortel. **Read more at www.nww.com, DocFinder: 1929.**

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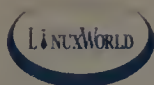
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Flood of compliance tools coming

BY ANN BEDNARZ

Four vendors this week plan to unveil products that do double duty: help companies monitor operational and system risks, and facilitate compliance with industry mandates such as the Sarbanes-Oxley Act.

Large companies are expected

to dole out more money this year than last on IT products to automate key compliance tasks. PricewaterhouseCoopers surveyed executives at 131 U.S.-based multinationals and found most want to improve how they use technology to remain in compliance. In particular, respondents

want technical assistance with SOX Section 404, which requires companies to attest to the effectiveness of the internal controls put in place to safeguard systems and processes related to financial reporting.

In the PricewaterhouseCoopers survey, 47% of executives said their company's use of technology in support of Section 404 compliance was "satisfactory — with lots of room for improvement." Just 38% said their company did a "great" or "effective" job with technology, and 10% said their technology efforts require major improvements.

Among all respondents, 75% expected to make significant technology changes in the second year of their SOX Section 404 compliance. Standing by are a slew of vendors with compliance software, including the four that are due to unveil products this week: ArcSight, Axentis, LogicalApps and OpenPages.

ArcSight is unique among these four vendors in that its focus is on security information management. Its flagship ArcSight Enterprise Security Manager (ESM) software collects and analyzes security data from devices such as intrusion-detection systems, firewalls, routers, switches and servers.

The tie-in to SOX compliance is that companies use ArcSight ESM to discover risks, correlate relevant security information and assess vulnerabilities — which are key parts of providing adequate internal controls.

To capitalize on compliance-related IT spending intends, the vendor this week plans to unveil ArcSight Compliance Insight Packages, a new family of products that bundle preconfigured report templates, rules and dashboards to help companies collect and review compliance-related data from log files.

The bigger risk picture

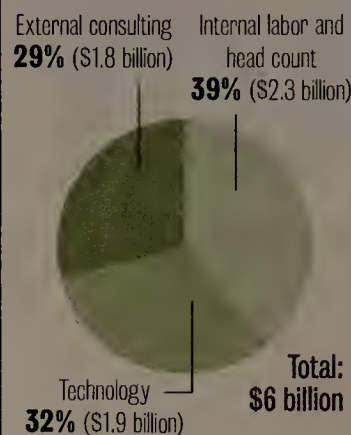
While ArcSight specializes in security log analysis, Axentis, LogicalApps and OpenPages operate in the broader compliance-management market, and each aims to help companies satisfy multiple mandates with a single framework.

Research shows that companies can save money by consolidating

SOX dollars shift to technology

Companies are expected to spend roughly the same amount this year as they did last year on complying with Sarbanes-Oxley Act requirements — \$6 billion in 2006, compared with \$6.1 billion in 2005.

SOX spending in 2006



SOURCE: AMR RESEARCH

compliance efforts. Companies that choose individual solutions for each regulatory challenge they face will spend 10 times more on IT products than those that take a sustainable, programmatic approach to compliance, according to Gartner.

Michael Rasmussen, a vice president at Forrester Research, warns companies to be wary of all-in-one corporate governance, financial compliance and enterprise risk management platforms, however.

There's a legitimate need for companies to consolidate previously fragmented methods of keeping tabs on the many areas of corporate risk: financial, legal, compliance, operational and technology risks. But there's no silver bullet for dealing with all of it.

Rather, risk management and compliance initiatives require a combination of interconnected and complementary technologies, Rasmussen says. In a report published late last year, he identifies four combination products: enterprise risk management dashboards, which aggregate metrics; governance, risk and compliance platforms, which tackle documentation, assessment and analysis; applications that quantify finan-

cial risk; and niche applications that target specific areas of operational risk and control oversight.

OpenPages is aiming at the governance, risk and compliance category with its new product, which is designed to help companies identify, monitor and mitigate operational risk.

The OpenPages ORM suite layers monitoring and analysis tools on top of the vendor's core collaboration, workflow, document management and publishing features. Dashboards and reports highlight key risk metrics, and business-process automation features can trigger notifications, for example, if a process fails.

OpenPages ORM lets companies tackle risk management and SOX initiatives in a single system, says Patrick O'Brien, director of product management at OpenPages. "A lot of the work that gets done for SOX compliance — the analyzing of internal control systems and the documentation and testing of that — is exactly the same work that has to be done for the operational risk-management process," O'Brien says. "You don't want to do that work twice."

LogicalApps is set to launch its Active Governance platform, which is designed to handle risk documentation, compliance operations and internal control automation. The software embeds controls for enforcing regulatory mandates and business policies within ERP applications so that transactions are analyzed for compliance as they occur, not after the fact, says Chris Capdevila, CEO of LogicalApps.

Axentis' product is an application integration framework called Enterprise Integrator. The software is the vendor's first attempt to package development work required to link enterprise applications to its flagship Axentis Enterprise suite, which is a hosted platform that combines workflow, reporting, security and content management features.

Axentis is developing Enterprise Integrator adapters for popular ERP systems, e-learning platforms, whistle-blower software for handling anonymous employee reports, and identity management products. The vendor also this week is expected to announce \$9 million in new venture funding. ■

Fed delay on net buy will cost carriers

BY CAROLYN DUFFY MARSAN

An unexpected delay in the award of a 10-year, \$20 billion federal network deal will cost U.S. carriers millions of dollars in lost revenue and lack of productivity from key staff, industry analysts say.

In a surprise move, the U.S. government announced last week that it would delay for nine months the award of Networx, which is one of the largest network bids up for grabs in the world. The Networx program will provide legacy and leading-edge voice, data and video services to all U.S. federal agencies.

All major U.S. carriers — AT&T/SBC, Qwest, Sprint Nextel and Verizon/MCI — submitted bids on the main piece of the program, which is known as Networx Universal. The federal government also delayed the award of Networx Enterprise, a leading-edge effort that reportedly received bids from these four carriers along with Level 3/WilTel, Sprint Wireless and Verizon Wireless.

Telecom industry analysts say Networx bidders will lose millions of dollars during the delay as they hold key personnel on their project teams together while awaiting the awards.

"My ballpark estimate is that it would be a \$2.4 million to \$3 million expense to hold the whole team together," says Bob Woods, president of Topside Consulting, which specializes in the federal government IT market. "Even if a carrier were able to hold its expenses to half that amount, we're talking about all of these bidders losing at least \$1.2 million. And that doesn't include not making their revenue projections."

"It's probably at least \$1 million a year per team," agrees Ray Bjorklund, senior vice president of market research firm Federal Sources. "Exactly how much money it will cost depends on how many continuing discussions or iterations the government wants to conduct. It could be 10 people or more that you have to have hanging around dealing with the ongoing procurement."

The Networx delay will have a ripple effect across the U.S. telecom industry because of the number of subcontractors involved in the massive project. For example, AT&T/SBC is using Cingular Wireless and Global Crossing on its Networx bid, while Verizon/MCI is using Comtech Telecommunications and Proxim Wireless Networks.

The Networx delay came as a shock to the industry. The General Services Administration (GSA), which oversees Networx, issued RFPs for Networx Universal and Networx Enterprise last May. Bids were submitted in October.

GSA originally planned to award Networx Universal in April 2006, but the schedule slipped last year to July 2006 for the award of Networx Universal and September 2006 for the award of Networx Enterprise. The new award dates are March 2007 for Networx Universal and May 2007 for Networx Enterprise.

"Networx offers exceeded our expectations in terms of the number and array of services proposed," GSA said in a statement. "Additionally, the scope of the acquisition coupled with the industry response has added unforeseen challenges and additional time to our evaluation

See Networx, page 14



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VoIP's role evolving

BY TIM GREENE

FORT LAUDERDALE, Fla.—VoIP and other IP communications features will be embedded rapidly in business software to expand the usefulness of future applications, according to experts at last week's Internet Telephony Conference and Expo.

Rather than being separate applications that users turn to when they need to reach others, elements of IP communications will be drawn into business applications on a Web services model. This is possible because VoIP breaks down into separate components all the elements — such as presence and call setup — that have traditionally been boxed up and inaccessible inside PBXs. The only way around this was computer-telephony integration, which required writing code to specific applications for specific proprietary PBXs.



Show goers check out the Asterisk booth at the Internet Telephony show last week in Ft. Lauderdale, where open source VoIP gear caught a lot of attention.

VoIP and other IP components let software developers blend communications elements they need to make better business applications.

For example, if an accountant needs to conference with an auditor and his manager, the means to pull together the call, videoconference or instant-messaging session will be present in an accounting application.

"VoIP becomes part of Web services, opening the communications platform up so any business application inside the enterprise can benefit from making it easier to connect with other people," said Todd Landry, vice president of marketing for IP PBX vendor Sphere Communications, who spoke on a panel about the future of VoIP.

The show, which attracted about 125 vendors and 8,000 attendees, featured keynote speakers such as former U.S. Secretary of Homeland Security Tom Ridge, who said that integrated IP communications was not only good for business but also essential to national security.

"The [National Security Agency] can already pull conversations of terrorists out of the air," which is useful in tracking down suspects, Ridge said. But in the future, converged IP communications will be key to

responding to terrorism by integrating stored data about sites of disasters with real-time data from the scenes.

This public-safety aspect of converged communications is one example of blending IP communications with applications, conference speakers said. VoIP, IM, teleconferencing, e-mail, voice mail, videoconferencing and other modes of communicating will be controlled by a combination of Session Initiation Protocol proxy servers that set up communications links and presence servers that publish who is available and how, said keynoter William Rich, CEO of PingTel and a proponent of the open source IP PBX sipX.

This is a view of IP communications shared by General Motors, according to Elliot Zeltzer, the company's global manager of converged telecommunications. The corporate goal is unified messaging, but the current reality is multiple voice mail, e-mail and even video systems. By migrating each system to IP, GM can embed communications in applications, Zeltzer said. "We'll go all-IP, then we'll converge," he said. "We'll go slowly. We need predictability and reliability."

That view is a vastly different model from the traditional PBX — a box containing proprietary software that could interact with data networks only after arduous computer-telephony integration, he said.

This cannot be done without much painstaking work, such as the ongoing attempts to create an E911 system that automatically updates the location of IP phones, so when someone calls 911 from an IP phone, the responder gets an accurate location of where the call was placed. Failure to set up such systems could result in corporate liability should someone, say, suffer a heart attack, dial 911, then pass out before he can say where he is, according to a legal expert who spoke at the show.

Depending on local laws and regulations, businesses may be required to keep location databases current, and may be legally responsible if they don't, said Robert Aldrich, an attorney with Dickstein, Shapiro, Morin & Oshinsky in Washington, D.C., who specializes in telecommunications law.

This is a concern of Robert Morse University in Pittsburgh, which is considering installing VoIP phones. The university wants accurate location data to go to public-safety teams but also to campus security, who might be able to help sooner, said Phillip Miller, a network analyst for the school. "As a manager of telecommunications, it's a problem I have to resolve," he said.

The goals of installing VoIP are to drive down communications costs and provide better features such as voice mail for students, but the school is taking a slow approach with a 50-phone trial first, he said.

The trial involves open-source PBX Asterisk, using a commercial form of it that is sold and supported by Digium. He said he is hopeful open source will help drive rapid innovation of new features as well.

Herman Webley, a software developer and consultant in Jamaica who attended the show, said he is trying to move along development of features with a Java presence client that could be installed on virtually any communications device. "The idea is all about connecting people," he said. ■

EMC announces high-end array, IP storage products

BY DENI CONNOR

EMC last week announced an array for customers whose organizations have the largest of storage needs.

At an event in London, the company rolled out its Symmetrix DMX-3, which can be configured with 96 to 2,400 drives. The company also announced new IP replication support and iSCSI technology for its network-attached storage (NAS) systems.

The DMX-3 array can support three Fibre Channel drive types within the same box, a feature analysts say is important in implementing an information life-cycle management strategy.

"The new DMX-3 makes it easier to manage storage inside the box than outside the box," says Steve Duplessie, senior analyst with the Enterprise Strategy Group. "If you ask anybody managing a disk environment what they want, it's a single box that contains all the tiers of storage and has a single point of management for anything."

Details on new DMX

EMC's Symmetrix DMX-3 comes in a variety of configurations.

Number of 2Gbps Fibre Channel drives	96 to 2,400
Drive size and rotational speed	73GB, 10,000 and 15,000 RPM; 146GB, 10,000 and 15,000 RPM; 300GB, 10,000 RPM; 500GB, 7,200 RPM.
Disk channels	16 to 64
Disk directors	2 to 8
PowerPC processors	16 to 130

The three drives EMC supplies in the DMX are pricey and fast 146GB, 15,000 RPM Fibre Channel; less expensive 300GB, 10,000 RPM Fibre Channel; and inexpensive, slower-access 500GB, 7,200 RPM Fibre Channel. The array, scheduled to be available in March, starts at \$250,000 and costs millions of dollars at the high end.

With support for three drive types, customers can migrate data from one tier of storage to another. They can use 146GB, 15,000 RPM drives for their business-critical data and migrate it to less expensive and slower drives as its value to the business decreases.

DMX sales accounted for one-third of all Symmetrix sales in the fourth quarter, EMC reported. EMC says the average system ships with 60TB.

The company also announced a new technology for IP connectivity called the Multipath File System for iSCSI (MPFSI) for its Celerra NAS platform. MPFSI supports either standard NAS file transport or iSCSI block transport to send data over the IP network using the faster block protocols or the slower file protocols.

MPFSI is like EMC's HighRoad technology, which automatically decides whether data will be transported across the IP or Fibre Channel network. MPFSI works with EMC's Celerra NAS arrays.

"You can buy a NAS box that also has iSCSI, but the transport of data is either-or," Duplessie says. "Part of it responds to file-system calls, the other [iSCSI] responds to block calls over IP. MPFSI does both — if you ask for a big file, it will automatically use iSCSI as a block transport. Blocks move faster than files."

EMC also announced that its Rainfinity Global File Virtualization now includes enhanced global namespace management and synchronous IP replication capability, which provide customers with improved management and protection capabilities for their file-based information. ■

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Investment goes to wireless companies

BY CARA GARRETSON

Investor interest in funding wireless companies picked up significantly in 2005, and that momentum is expected to spill over into this year as customer demand for all things mobile continues to grow.

Venture capital deals made with wireless companies in 2005's fourth quarter totaled \$366 million, accounting for a little more than 16% of the \$2.2 billion invested in networking-related companies overall, according to the MoneyTree Survey by PricewaterhouseCoopers, Thomson Venture Economics and the National Venture Capital Association. This group generates a special slice of its quarterly data for *Network World* that includes providers of computer and peripheral products, Internet communications, IT services, network gear, software and semiconductors.

For the year, wireless investments totaled \$1.3 billion, or 13%, of all network-related investments, which totaled \$10.4 billion. That total was up 13% from last year (see graphic, right).

There's no one wireless technology or innovation fueling this interest, just insatiable customer demand, says Tracy Lefteroff, global managing partner of PricewaterhouseCooper's venture capital and private equity practice. "We continue to see interest in all the building blocks necessary for delivering things to mobile devices — from chips to handsets to interactive software and the content itself — they're all key elements in this wireless arena."

But with greater adoption of any technology comes challenges, and securing and managing wireless networks will be areas that start-ups focus on in

2006, one venture capitalist predicts.

"The challenge of end-to-end wireless security is huge," says Michael Skok, general partner with North Bridge Venture Partners. He also believes this year companies will come up with products that can monitor and manage from the core of wireless networks to the edge, as opposed to the piecemeal solutions in place today.

While software maintained its dominant position last year as the sector that received the most investments with \$4.7 billion, that figure was down 10% from the amount poured into these companies in 2004, according to the report.

In 2006, companies that develop enterprise software are expected to continue to lose favor to those in the Web services arena, Lefteroff predicts. "Now, unless you're Oracle or Microsoft, [investors] don't view that you're going to be able to build a long-term sustainable company."

Instead, investors in 2005 looked to the Internet again to fuel innovative business models. According to the MoneyTree report, which defines the Internet sector as comprised of companies with business models that are fundamentally dependent on the Internet, investments made in those companies grew slowly over the last three years and totaled \$2.9 billion in 2005.

This increase is due in part to the interest in Web 2.0 companies, or those that have found a way to build a sustainable business online, says Kate Mitchell, managing director with BA Venture Partners. The buzz around Web 2.0 companies and technologies is expected to sustain itself through 2006. ■

There's money in mobile

Half of the top 10 investments in network-related companies during the fourth quarter went to wireless start-ups:

Company	Sector	Amount (in millions)
MetroPCS	Wireless service	\$50
AMp'd Mobile	Broadband wireless services and mobile entertainment	\$43
Barracuda Networks	E-mail security	\$40
NexTone Communications	VoIP equipment	\$35
Mrofma Group	Mobile entertainment	\$30
Perfect Commerce	E-commerce services	\$30
14 Commerce	Online payment	\$28
Impinj	RFID semiconductors	\$27
Firefly Mobile	Mobile phones and service for kids	\$26
Navio Systems	Mobile e-commerce	\$25

As a percentage of overall investments in network-related companies, wireless has grown steadily.

	Wireless investments	Overall network investments	% of overall investments that are in wireless
2005	\$1.3 billion	\$10.4 billion	13%
2004	\$1.1 billion	\$11.2 billion	10%
2003	\$850 million	\$10.3 billion	8%
2002	\$884 million	\$12.5 billion	7%

SOURCE: THE MONEYTREE SURVEY

CA boosts management, security software

BY DENISE DUBIE AND ELLEN MESSMER

CA this week plans to introduce upgraded asset and security management software that customers say should help eliminate technology integration headaches.

The Asset Management 11 suite boasts new financial asset tracking features, but perhaps more importantly, includes a central database and consistent agent technology across its components. Integrated Threat Management 8 now combines anti-

virus and anti-spyware.

"Integration is the biggest problem any one would have implementing this type of software, which has to manage different metrics across an enterprise," says Albert Porco, CIO at Kings County Medical Center in New York. "Prior to CA doing the integration, it was simply not feasible for us to perform certain tasks, such as financial asset management, on our own. We honestly just didn't track it."

Porco uses CA applications to perform software distribution, remote control and asset management duties. Because CA has incorporated a common management database and single agent technology across its products, the CIO says he can start tapping the database for license, versioning and financial data to associate a cost with maintaining some 3,000 desktops and 60 servers.

Until recently, CA's \$40-per-desktop software could be used to track desktop and server systems and software, but the company hadn't completely tackled financial asset management, such as determining the cost of supporting a desktop over its

lifetime. Competitors HP (via its Peregrine buy) and IBM (with its CIMS Lab purchase last week) have recently added asset management to their technology portfolios.

"Management vendors are finally applying the data they collect in such a way that it can help make business decisions across departments," says Rich Ptak, principal analyst and founder at Ptak, Noel & Associates.

Harry Butler, support center manager at electronics supplier EFW in Fort Worth, Texas, says the asset management capabilities CA now provides could help him extend the life of desktop machines and save money for his company.

"They aren't making huge improvements in PCs every three years anymore so I could repurpose machines or put off replacing them if I can prove the cost isn't worth the expense," he says.

Butler also is taking advantage of the updated agent technology CA announced in November at its annual user conference. He configured the software distribution application to send one new agent to machines and decommission the three or four agents already running on them.

"The network people are very happy with that feature because now they have less sitting on their boxes," he says.

Also available this week is Integrated Threat Management 8, a combined anti-virus/anti-spyware product for Windows-based desktops and servers.

Chuck Slenker, systems engineer at Hartford Hospital, in Connecticut, has been beta-testing the software for five months on 5,000 Windows desktops and servers, and says it is much easier to administer than separate agents.

"The spyware is probably worse than the viruses coming out these days," Slenker points out, noting that once spyware infects a machine, it usually requires a complete re-imaging.

CA says other plans this year for its Integrated Threat Management offering include adding a desktop firewall function based on technology obtained through its Tiby Software acquisition.

Pricing for Integrated Threat Management starts at \$60 per desktop. CA will continue to offer anti-virus and anti-spyware as separate products. ■

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Net neutrality debate heating up

BY DENISE PAPPALARDO
AND JIM DUFFY

If they haven't already, enterprise network executives should sit up and take notice of the debate swirling around network-neutrality rules, industry experts say.

If incorporated into law or federal regulations, network-neutrality principles could prevent ISPs from charging premiums to give priority to the traffic of their preferred customers and from blocking or slowing applications such as VoIP. Congress is considering making network-neutrality principles law as it debates communications reform this year, but some large backbone providers oppose legislation.

Whether such rules will be adopted remains unclear, which has one IT executive concerned.

"I'm afraid that net-neutrality legislation will put the content of the Internet in the control of

broadband providers," says Jason Hittleman, vice president of information systems at RKA Petroleum in Romulus, Mich. "This will have serious impacts on enterprise users . . . by enabling centralized control of content. I also believe that pricing will become an issue because the model will limit the number of available providers, thereby reducing or eliminating variety and competition."

Although analysts believe it's unlikely that service providers would render any particular Web applications or classes of them completely unavailable, no one knows how the issue will play out. What is feared is the emergence of an application class system and even higher service rates.

With so many employees working outside of the main office, resolution of the issue promises to affect most businesses. According to Nemertes Research, 90% of

employees do not work at their company headquarters. "The number of virtual workers has grown by 800% over the past five years," says Johna Till Johnson, president of the consulting firm and a columnist for *Network World*.

In many cases these employees are connected to their corporate offices by consumer DSL or cable modem Internet access services. "Many businesses do not realize how heavily reliant they are on consumer broadband services," Johnson says.

At the center of the debate is whether Internet backbone owners should be allowed to charge content providers such as Google or service providers such as Vonage for using their networks. BellSouth is one provider that backs this idea.

"We still believe that content providers like Google Earth would pay a small amount to

give their service a priority. And certainly, we think the same with the movie studios," says a BellSouth spokesman. "What the impact would be is, if we are prohibited from recouping our costs somewhere, the Internet slows down because there's so much traffic. As traffic increases, we have to increase our capacity. And somewhere along the line we've got to make a business case for that."

The backbone providers contend that if a VoIP provider paid a fee to AT&T, for example, it could be guaranteed a premium level of service. But what happens if your VoIP provider isn't paying for top-shelf service?

Despite concern that certain traffic could be slowed, the FCC has made it clear that blocking traffic altogether will not be accepted. About a year ago the FCC started an investigation into allegations that a rural local exchange carrier (LEC), Madison River Communications, which offers service in Illinois, North Carolina, Mississippi and Louisiana, was blocking VoIP traffic. In March the FCC and the LEC came to an agreement and the FCC issued a consent decree whereby the service provider paid a \$15,000 fine and agreed to stop blocking VoIP traffic.

One way users can protect themselves is to inventory all of their Internet-based applications, share it with their ISP and then get the ISP to promise not to block or slow that traffic, Johnson says.

Users also have to keep a close eye on how this issue develops, because it has the potential to increase telecom service prices, says Thomas Nolle, president of consultancy CIMI Corp.

Nolle points out that carriers are trying to find a way to balance the cost of keeping their networks running optimally as traffic demands continue to increase. "If you can't come up with a cost balance that is workable . . . the carriers will under-invest in infrastructure," he says.

"Unenlightened regulatory policy ultimately ends up stifling investment," he says. "It either raises costs for business for cross-subsidization, or it reduces infrastructure investment, which disqualifies a whole bunch of services that people think they wanted." ■

Networx

continued from page 8

schedule. Thus, more time will be required for government-industry discussions and negotiations to ensure that GSA continues to offer agencies the best value contracts they have come to expect."

Industry analysts question GSA's explanation for the Networx delay, which is longer than normal for a federal IT contract award.

"This is a high-stakes contract, and it means a lot to the federal customer base," Bjorklund says. "It also means a lot to the telecommunications community because the Networx Enterprise program has attracted a whole bunch of companies. With something of this magnitude, I could see it slipping a few months but not this long."

Woods says that the conventional wisdom among federal IT circles was that the GSA would receive between 10 and 15 bids on Networx. GSA should have staffed up and been prepared to evaluate the 11 bids that were submitted, he says.

"It was pretty well known how many offers there were going to be," says Woods, a former commissioner of the GSA and longtime IT executive with the Transportation and Veterans Affairs departments. "I don't believe the number of bids was unexpected. I do believe that the bids are probably more complicated than expected. But the government wrote the RFP . . . The government knew this thing was complicated."

The Networx delays also hurt civilian and defense agencies that were looking to this program for upgrades or transitions to new technology, particularly VoIP. Barry West, CIO of the Federal Emergency

Networx At a Glance

Description:	Upcoming federal procurement for telecom services.
Length:	10 years
Estimated value:	\$20 billion
Parts:	An all-encompassing Universal program and a targeted Enterprise program for niche services.
Universal bidders:	AT&T, Qwest, Sprint Nextel and Verizon.
Enterprise bidders:	AT&T, Level 3, Qwest, Sprint Nextel, Sprint Wireless, Verizon and Verizon Wireless.
Award date:	March 2007 for Universal; May 2007 for Enterprise.

Management Agency, told an audience of IT executives last Wednesday that he was unhappy about the delays and uncertainty surrounding the project.

"I've heard comments from federal IT executives that they weren't told about the Networx delays," Woods says. "They made budget plans for their network transitions. They've gone to Congress and gotten transition money, and now they have to go back and get it moved into another budget."

U.S. carriers remain confident that Networx eventually will be awarded and will prove to be a good opportunity for the winners.

"Nine months may sound like a long delay, but we're talking about a 10-year contract with 53 services that is worth billions of dollars," says Susan Zeleniak, vice president for civilian affairs at Verizon/MCI. "I've never been involved in a government procurement with this big of a delay, but I've never been involved with a government procurement this big either. If the delay means that the quality of the evaluations and awards and decision making is improved with time, that's a benefit for the whole industry." ■

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1. The first step is to identify the problem. This involves understanding the current situation and the goals that need to be achieved.

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Data center

continued from page 1

processors and on-chip power management are emerging to stem fast-rising power demands, but IT managers still must look at alternative ways to cool harder-working systems than simply adding HVAC, experts say.

"The last thing I would want to do if I were a data center manager is buy more HVAC. That's a huge investment," says John Humphreys, a research manager at IDC. "So what are the incremental investments you can make that help you avoid doing things like re-architecting, reconfiguring or buying more data center space, or more cooling or power? Those are the issues vendors are trying to address through services [and] investments in R&D."

Virtualization is one approach. With it IT managers can reduce the number of physical systems they need to power and cool by consolidating multiple workloads into virtual machines on single physical systems.

Other approaches include taking a closer look at applications and decommissioning those that

are no longer necessary, and distributing systems to eliminate hot spots. At the same time, IT managers should keep an eye on new products and services as they put a heightened focus on power and cooling.

The University of Florida last fall brought in Opteron-based servers from Rackable Systems, which focuses on thermal design to avoid spending more than \$350,000 to build a new machine room to triple the size of its high-performance computing cluster.

"Tripling our capacity with the same technology would have required roughly 30 tons of additional cooling and 15 to 18 additional racks," says Charles Taylor, senior HPC systems engineer and associate director of the University of Florida HPC Center in Gainesville.

Taylor says he liked Rackable Systems' rack density and power, specifically the efficiency of DC power.

"By combining these capabilities with the lower power consumption of dual-core Opteron processors, we were able to expand our computational facilities to the desired 3Tflops without

Hot seat

Today, servers pack more processing power in smaller spaces, creating challenges for IT managers who need to power and cool these denser systems. A few tips for creating facilities that can stand the heat:

- **Plan ahead:** Have a good idea of projected growth and the processing power you're going to need and be realistic about cooling capabilities and available power before forging ahead with new deployments.
- **Keep up with advances:** From liquid cooling to servers with lower-power processors to power management technology, systems vendors are rolling out alternatives to the traditional HVAC approach to cooling.
- **Make servers more efficient:** Server virtualization and multi-core processors should get a second look.
- **Get a fresh perspective:** Take a look at power-related metrics such as Sun's SwaP (space, wattage and performance), which takes into account space and power demands in addition to raw performance.
- **Go with the flow:** Look closely at how — and how much — air moves in and out of racks.
- **Stretch it out:** Instead of packing dense servers into a single rack, add more racks if space permits, and spread them out.

building a new machine room," he says. "We now have a 3Tflop cluster, including 40TB of Fibre Channel storage that takes up less space [six racks] than our previous 1Tflop cluster and requires about the same cooling."

Egenera acts cool

In the past week, blade pioneer Egenera and HP announced products aimed at helping customers manage hotter-running systems.

While unveiling its BladeFrame blade server, Egenera announced a partnership with Emerson Net-

work Power to add its Liebert XD cooling technology to the BladeFrame chassis in the second quarter.

Cooling modules, which Egenera has dubbed CoolFrame, will clamp on to the back of a BladeFrame chassis and connect to the Liebert XD, which connects to a data center chiller that can be located as far away as 150 feet.

Adding CoolFrame modules to a BladeFrame EX will reduce the heat dissipation of the rack from as much as 20,000 watts to a maximum of 1,500 watts without affecting the performance of the 12-processor cores per square foot, Emerson says. The CoolFrame also reduces the energy costs for data center cooling by eliminating 1.5 kilowatts of fan load per rack from the cooling system, Egenera executives say.

Virginia Polytechnic Institute and State University likes the Liebert XD approach. About two years ago, the Blacksburg, Va., school deployed a supercomputing cluster of about 1,100 Apple G5-based systems.

"We only had an 18-inch raised floor, and we were going to have 8 kilowatts per rack with 40-plus racks, so we were looking at 320 kilowatts of heat dissipation in a very small area," says Kevin Shimpugh, director of research and cluster computing at Virginia Tech. "We were going to have to build a new data center, raise the floor or look for something else."

The Liebert XD attaches to the top of each rack and sucks hot air out at the top to cool it.

"With the equipment, we now can handle 20 to 30 kilowatts per rack. That's a lot of power," Shimpugh says. "Before getting the Liebert gear, we could handle 8 kilowatts a rack."

HP also is taking the liquid-cooling approach and today is expected to announce its Modular Cooling System, which uses chilled water to cool systems in a new, universal 10000 G2 Series Rack, which can hold any rack-mounted server or storage system HP sells. The Modular Cooling System starts at \$30,500 and the rack is priced at \$1,250.

HP also is expected to roll out its Power Distribution Unit Management Module, which will link in to Systems Insight Manager to enable customers to control power distribution at the individual server level. It's priced starting at \$200. ■

Hearing set on BlackBerry issue

BY JOHN COX

The next legal skirmish for Research in Motion in its patent battle with NTP will take place Feb. 24 in a federal courtroom closely watched by customers worried that RIM's BlackBerry service could be shut down.

Last week, U.S. District Court Judge James Spencer set the date for a hearing to consider a possible injunction against RIM, maker of the BlackBerry wireless e-mail device. NTP has asked the court to close down the BlackBerry service in the United States and to stop the manufacture and sale of the handhelds. Both companies are scheduled to file arguments in the case by Wednesday.

Right around the time the parties will be meeting in the courtroom, the U.S. Patent and

Trademark Office (PTO) could be moving toward a decision about the NTP patents at the heart of this dispute. Last December, the office issued another set of preliminary rulings that found NTP's patents to be invalid. NTP's response is due by Feb. 28.

A report last week by analysts at Goldman Sachs noted that "NTP must prove that these patents contain new inventions on several key patents by Feb. 28 or face the PTO permanently rejecting the patents," the authors wrote. "If the PTO issues final rejections on any or all of the five NTP patents, this could change the course of the lawsuit. To the extent that patents are ruled invalid, we believe that it is likely that this would be considered by the District Court."

An NTP spokesperson had not returned a request for comment by deadline.

Even if the injunction is granted, it's unclear which users would be affected or how badly.

NTP's injunction request includes an exemption for public safety and certain other users, mainly in government and defense, and a 30-day delay to allow other users to make alternative arrangements for wireless e-mail.

RIM, in a statement last week, says it would "present the courts with facts and arguments that warrant a longer grace period."

RIM executives have consistently declined to comment in interviews, and did so again last

week, issuing the written statement instead.

"There are compelling public interests against entry of an injunction, and NTP can be fully compensated through ongoing royalty payments in lieu of an injunction," the statement says.

RIM says it has written software, dubbed "the workaround," that is ready to be installed if necessary. But the company still refuses to give any details about how the new software actually works, or what kinds of resources would be needed to install, test, update and maintain the software in enterprise deployments.

NTP previously has insisted that it considers the workaround to be covered by its patents.

"I'm trying to get details on the workaround," says Bridget O'Flynn, CEO of Datavoci, a St. Louis software developer that writes business applications for the RIM software platform and devices. "We'd like to have something in place in case they do cut off service."

O'Flynn says she's been getting some calls from enterprise clients, but no one is panicked. "Mostly, they're concerned about whether the [BlackBerry] device will keep working, whether they'll still be able to get e-mails and data and if they can't, will our products work on a Treo or some other device," she says. "Our software can work on another device. But not overnight." ■

Corrections

• The brief in the Net infrastructure section (Jan. 23, page 19) should have spelled the company name as SPI Dynamics.

• The test "LANDesk rules the roost in desktop management" (Jan. 23, page 42) had the incorrect scores in the scorecard. To see the corrected version, go to www.nww.com, DocFinder: 1928.

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Universities ready spyware hall of shame

BY ELLEN MESSMER

Harvard University and Oxford University are teaming with *Consumer Reports* to launch a Web site called StopBadware.org, which will be an online hall of shame for those trafficking in spyware or questionable forms of adware.

Decisions about which individuals, vendors and businesses will be singled out for criticism and discussion for propagating and promoting "badware" will fall to the organizers of the effort, operating together as The Stop Badware Coalition.

Co-director of the coalition John Palfrey is professor of Internet law at Harvard as well as executive director at Harvard's Berkman Center for Internet and Society.

He says he expects the Web site to act like a neighborhood watch by highlighting criminal spyware programs and their use. It will also point out adware that — while not illegal — could be "unscrupulous," Palfrey says.

The Stop Badware Coalition expects to make its first posting naming badware in about a month.

Palfrey says the primary goal of The Stop Badware Coalition and its Web site is to illuminate the workings of spyware and the worst forms of adware so it "will no longer be allowed to hide in the shadows of the Internet. We want to help put some definitions on this."

The affect the coalition wants to have is to "allow consumers to take a stand," Palfrey says.

The coalition has an international thrust through the participation of Oxford's Internet Institute. Jonathan Zittrain, co-director of StopBadware.org and professor of Internet governance and regulation at Oxford, says the time has come to help people know "what they're getting when they encounter code."

One underlying concern about badware, the coalition's organizers agree, is that people are retreating from using the Web as their worry about spyware and adware grows.

Funding for the project is coming from Google, Lenovo and Sun, which have provided "multiyear, multimillions" in sponsor-

ship, Palfrey says.

The coalition's advisory board will include individuals such as Ari Schwartz of the Washington, D.C., advocacy group Center for Democracy and Technology (CDT), which has been active in investigating spyware and adware. Much of the research work that will be posted on the Web site will be done by university researchers.

When asked if The Stop Badware Coalition is prepared for legal challenges from those who may object to being listed on the site, or for Internet-based attacks from spyware developers, Palfrey says these wouldn't necessarily come as a surprise. "That could happen," he says.

But he adds that he's confident the basic research on the material to be published at StopBadware.org will hold up to scrutiny and provide a valuable public service.

Adware complaints

Separately last week, the CDT filed two lengthy legal complaints with the Federal Trade Commission, asking the FTC to inves-

tigate advertising software developer 180solutions and affiliate CJB.NET for unfair and deceptive practices.

The first complaint alleges that the core business model of 180solutions "depends on third-party affiliates committing unfair and deceptive practices on the company's behalf." At the heart of the complaint is the assertion that a 180solutions product called Zango is continually being installed without users' consent or through deceptive means.

CDT spokesman David McGuire says the group had conducted discussions with 180solutions over the past two years about these concerns, but felt an impasse had been reached that compelled it to file the two complaints. The FTC has acted on similar complaints in the past by opening investigations.

180solutions spokesman Sean Sundwall says the firm has not yet reviewed the CDT filing with the FTC, but emphasizes that "180solutions and CDT share the same vision of protecting the rights and privacies of consumers on the Internet." ■



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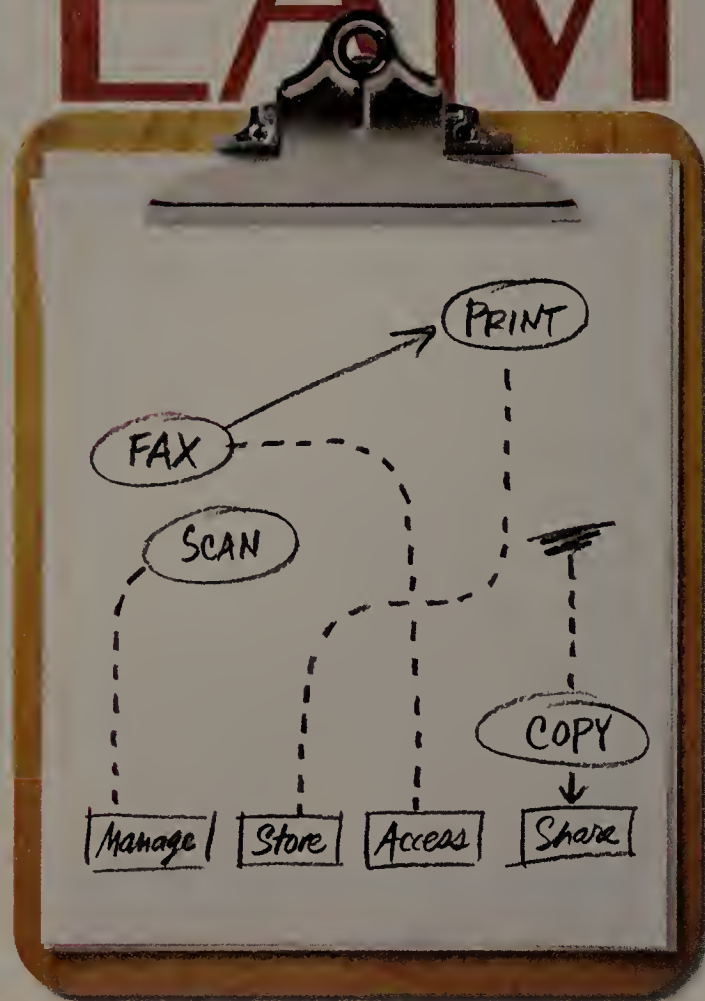
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F5 updates data center, WAN devices

BY PHIL HOCHMUTH

F5 Networks this week is expected to announce three updates to its BIG-IP family of data center and WAN traffic control devices; on tap are 10G Ethernet upgrades for F5's data center switches and advanced traffic-shaping features for the vendor's wide-area load balancing and WAN link optimization products.

F5's BIG-IP 8400 is the company's largest-scale Layer 4-7 switch, letting users consolidate massive amounts of

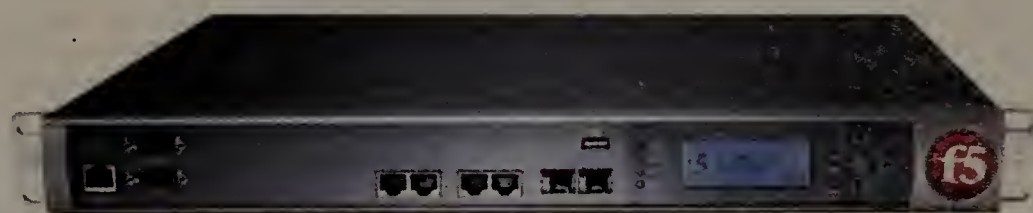
data center server links and provide traffic load balancing and services such as SSL acceleration and Layer 7 application switching at 10Gbps.

New versions of F5's BIG-IP Global Traffic Manager and BIG-IP Link Controller introduce features that can help a business fail over customer traffic among data centers, or improve the performance of sites hooked into multiple carrier connections.

The BIG-IP 8400 includes 12 Gigabit Ethernet and two 10 Gigabit Ethernet ports that can process IP packets with Layer 4-7 switching features without degrading traffic throughput, according to F5. The company says it is able to do this by offloading specific Layer 4-7 tasks — such as SSL acceleration, cookie inspection and denial-of-service attack prevention features — to ASICs, which are specialized processors inside the device.

The 8400 would be deployed in a data center, attaching multiple server links via its Gigabit Ethernet ports, with the 10G uplinks connecting to a data center core switch, such as a large chassis from 3Com, Alcatel, Cisco, Nortel or Foundry Networks.

It competes with products such as Foundry's ServerIron GT (announced last week with 10G interfaces), as well as 10G-capable load balancers from Cisco, Citrix



F5 is adding advanced application security features to its BIG-IP switches.

(Netscaler), Nortel (Alteon) and Radware. The box is priced at \$77,000, with 10G Ethernet optics costing \$3,500 per port extra.

A new version of F5's Global Traffic Manager (GTM) includes features that let the box do a better job of tying together disparate applications or services used in service-oriented architecture and portal-based applications, F5 says. Past GTM products were used just to boost the performance of traffic failover among primary and back-up data center sites or mirrored Web server farms.

F5 says the GTM performs faster and more efficient redirection than basic Border Gateway Protocol redirect functions in Cisco routers.

A new management interface lets users tie together applications located at separate data centers that may belong to one Web portal or dashboard application. This Distributed Application Management feature lets administrators manage connectivity

and access for the piece parts of a Web portal as if it were a single application, F5 says. The device costs \$27,000.

F5 also is introducing a new version of its Link Controller. This device, which is used to optimize multi-home connections to multiple carriers, such as T-1 links from AT&T and MCI terminated on the same router. Multi-home links let organizations boost bandwidth to the Internet, while offering redundancy in case of a carrier network outage.

F5 is adding features commonly found on WAN optimization boxes from Cisco, Citrix, Juniper and SilverPeak. F5's Link Controller now can add traffic shaping and compression as well as TCP session termination.

The additional features could help businesses increase the performance of traffic on multi-home links in addition to managing the availability to the links, F5 says. The Link Controller costs \$15,000. ■

Short Takes

■ **Cyveillance** has announced an updated version of its online risk-monitoring and management service based on a hosted portal that lets corporations monitor blogs, message boards and the Web for information that might target them, violate copyright or lead to illicit activity. **Intelligence Center 3.0**, which costs \$50,000 per year for a subscription, includes a way to generate letters, such as cease-and-desist requests, in addition to other document-generation tools.

■ There will be a resurgence in the **wireless LAN market** in 2006, according to researchers at Dell'Oro Group. Many customers were holding off in 2005 during an industry transition between traditional independent access points and WLAN switches with easier centralized security and management, says Greg Collins, an analyst at Dell'Oro. The turning point was Cisco's acquisition of wireless switch vendor Airespace, Collins says. Although a large percentage of corporate WLAN deployments still are in specialized industries, general offices have been adding the technology since 2004, he adds. Cisco has a 60% share of the enterprise market, according to Collins. By 2009, the overall Wi-Fi market, not including integrated routers, will reach \$4.8 billion in revenue, he says.

Imperva takes aim at compliance

BY TIM GREENE

Application firewall vendor Imperva is introducing software that makes it easier for customers to prepare reports for government and industry audits that determine whether businesses adequately protect sensitive information.

The company has written three software packages designed to answer security-assurance questions put forth by the Sarbanes-Oxley Act (SOX), the Health Insurance Portability and Accountability Act (HIPAA) and payment card industry regulations.

The software is an add-on to Imperva's SecureSphere Gateways, which are in-

stalled between Web servers and networks and analyze Web application and database traffic. Based on this analysis, they set base-lines for normal traffic and block traffic that falls outside normal activity that might indicate an attack.

In performing these tasks, the appliances gather data to prove compliance with SOX, HIPAA, payment card industry regulations and other regulatory requirements. The software digests this data and formats it to comply with the reports required to meet these requirements.

SecureSphere appliances protect networks and gather data at the network level via a firewall; at the application level via a

Web application firewall; at the database level via a database auditing and assessment engine; and the data itself by monitoring what data is stored.

One caveat is that no single reporting tool can deliver complete reports, says Diana Kelley, a senior analyst with Burton Group. Regulatory agencies want such a variety of disparate information that every business needs to develop a compliance toolkit that pulls together the data required.

"There's no way you can do this manually and there is no one tool that does it all," Kelley says.

For instance, regulations call for proof that documents are managed securely, something that falls outside the scope of what Imperva's gear does. Similarly, Imperva does not deal with what business processes are

See Imperva, page 22

SOX costs

The average first-year cost of implementing Sarbanes-Oxley Act compliance among 90 Fortune 1000 companies was \$7.3 million.

SOURCE: CRA INTERNATIONAL

3Com blends switching, intrusion prevention

BY PHIL HOCHMUTH

3Com this week is expected to announce a chassis-based version of its TippingPoint security switch that combines traffic-inspection duties with the scale of high-end data switching, up to 10G Ethernet.

The 3Com TippingPoint M60 will let customers consolidate intrusion-prevention system (IPS) and LAN switching in a single high-scale chassis. The M60 can be used to consolidate traffic inspection for an entire organization while maintaining security separation between groups of users.

The M60 chassis comes with seven, 10 or 14 slots — two slots are occupied by redundant management modules. Each slot holds modules that have as many as six active Gigabit Ethernet ports. (Six pairs of copper/fiber ports let users mix cabling types.) A dual-port 10G Ethernet card also is available for the device.

Each blade in the M60 acts as a stand-alone IPS device, similar to TippingPoint's T-series appliances, in which network connectivity and IPS packet processing are done on the hardware. (The exception is with 10G interfaces; the M60 uses 3Com's 8800 dual-port 10G blades, which connect

to TippingPoint IPS blades through the switch's backplane.)

The blades run 3Com's TippingPoint IPS device operating system and use the vendor's Digital Vaccine updating service, letting the device identify the latest threat signatures and vulnerabilities.

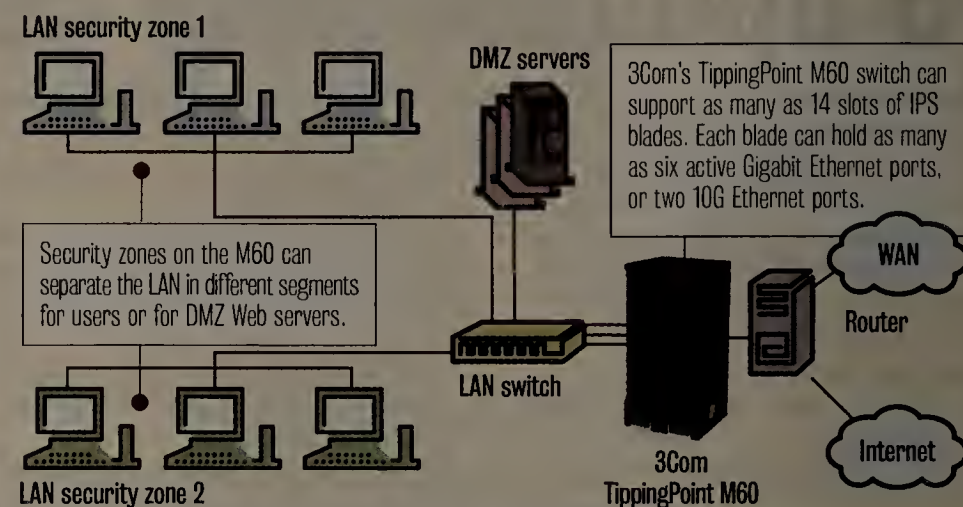
The advantages of running IPS services on a chassis-based box include having shared redundant power supplies in the M60 chassis, and the ability to configure and control IPS settings on the blades through one device interface, 3Com says. But the scale is the real benefit.

The switch can support a maximum of 144 IPS ports, which can be divided into 72 security segments, each segment getting an ingress port for "dirty" traffic coming into the IPS, and an egress port for "clean" traffic delivered to the LAN or security segment.

In addition to the M60 chassis, the IPS blades that fit in the device also will work in 3Com's Switch 8800, a large-enterprise core switch chassis developed in 3Com's joint venture with Huawei Technologies. (Much of the M60 also was developed in the Huawei-3Com joint venture.) According to 3Com, running TippingPoint IPS blades in

IPS steps up

3Com is integrating its TippingPoint intrusion-prevention system technology into a new M60 chassis-based switch for high-volume traffic inspection.



the Switch 8800 lets users consolidate IPS into the LAN switch layer, eliminating the need for external network appliances and allowing the IPS to hook into a 40Gbps connection to the switch's backplane.

The 3Com TippingPoint M60, which will be shown at the RSA conference in San Francisco this week, will be available in mid-2006, 3Com says. Pricing for the device will be available at that time. ■

Hardware helps protect sensitive corporate data

BY ELLEN MESSMER

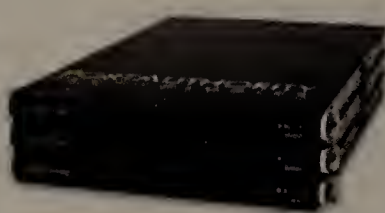
Security vendor PortAuthority last week unveiled a line of hardware appliances used to prevent sensitive data from being transmitted outside a corporate network via e-mail, FTP or HTTP.

The company decided to make its monitoring and prevention product available as an appliance line because customers may find it easier to deploy preconfigured hardware rather than having to load the PortAuthority software onto a server.

The devices include the M100 and M500. The company says it will continue to provide a software-based version of its data-leakage prevention product but will encourage customers to make the transition to the appliance line offered as PortAuthority 4.0.

PortAuthority competes against vendors such as Vontu and Vericept in the area of outbound monitoring and blocking, or extrusion prevention, says Raj Dhingra, PortAuthority's vice president of product marketing.

The latest version of the management console and outbound



PortAuthority's new hardware — the M100 and M500 — block sensitive data from being transmitted outside a corporate network. The boxes work in conjunction with the company's MX management module.

data-monitoring product, PortAuthority 4.0, adds a way to block sensitive data, such as Social Security numbers or personal financial information.

But it requires a way to interact with a URL filter proxy that supports the Internet Content Adaptation Protocol (ICAP). This is a content protocol developed by an industry group called the ICAP Forum. The group submitted the protocol, which is used for various purposes — including directing traffic and anti-virus engines — to the IETF as an RFC. Vendors such as Blue Coat and Network Appliance are among those supporting ICAP in Web-filtering prod-

ucts, and Cisco for firewalls and routers, Dhingra says.

PortAuthority 4.0 routes all outgoing Port 80 requests to the PortAuthority appliance so that content can be inspected to ensure it doesn't violate the security policy established by the PortAuthority MX management console.

Another new feature in PortAuthority 4.0 is that it can block printing of sensitive information by departmental printers. This would require installing a PortAuthority software agent on a Windows or Novell printer server to examine network-based printer requests. "This could be authorized by group, sender or content alone," Dhingra says.

"We definitely plan to use it to extend control beyond just e-mail," says Kirk Drake, vice president of IT at the National Institutes of Health Federal Credit Union in Rockville, Md., which has used PortAuthority for more than a year.

The credit union uses PortAuthority to monitor and block outbound e-mail from employ-

ees that might contain sensitive financial information concerning credit-union members. PortAuthority "captures 10 or 20 items every month, usually an employee responding to an e-mail sent by a credit union member that contained a credit card number," Drake says. The

vast majority of blocked content represents simple errors by employees, he notes.

The PortAuthority appliances, which are priced from \$25,000 for the M100 to \$45,000 for the M500, are scheduled to ship next month. The MX management module costs \$25,000. ■

Imperva

continued from page 21

in place to promote confidentiality, so that its gear could not document that processes comply.

"These three regulations are widely varied in scope," says Michael Gavin, a senior analyst with Forrester Research. Regulations on the payment card industry "are very stringent about what data must be encrypted, for example. You can't store certain data."

Businesses should double-check whether the reports give enough data to meet the various regulations, Gavin says.

Imperva's gear adjusts what it considers normal application use based on how applications are accessed over time and automatically adjusts what it will block as potentially threatening traffic.

This also reduces how much manual work administrators have to do to protect data as applications, databases or data usage change.

The three software packages — SecureSphere/SOX, SecureSphere/HIPAA and SecureSphere/payment card industry — are sold separately.

A SecureSphere appliance with one of the compliance modules costs \$32,500. ■



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Start-up adds oomph to VMware

BY JENNIFER MEARS

Vizioncore, a start-up backed by management product vendor Quest Software, says it can eliminate the complexity of using VMware virtual machines for disaster recovery.

The company is selling a Windows-based tool called esxRanger designed to allow IT administrators to set policies for backing up and restoring virtual files.

The product can be used to schedule hot backups of VMware ESX Server virtual machines — software files that contain an operating system, application and related data, and are separated from the underlying hardware. The backed-up files are compressed to make more efficient use of bandwidth and storage hardware, says David Bieneman, founder and CEO of Vizioncore.

Without esxRanger, ESX Server customers can power down virtual machines and copy them or use complicated Linux scripts

to automate the task, Bieneman says.

“What we do is make recurring-image backup reliable — without shutting down, without interruption,” he says. “We make it so that any level of administrator can do it.”

Citgo, for example, brought in VMware ESX Server about one and a half years ago to consolidate its file and print servers for more centralized management. Initially, the petroleum company planned to use scripting to back up some 32 virtual machines it has running on four IBM blade servers, but found esxRanger better met its needs.

“With the combination of VMware, esxRanger and Tivoli backup, disaster recovery is much easier than [with] individual servers,” says Ron Folds, system analyst at Citgo Petroleum in Sulphur, La. “This is because the [VMware virtual disk] file is the actual server. After the vmdk file is restored you have the server with the correct configuration, [provided you keep your

vmdk file backed up as changes to the servers are made.] You then apply the latest incremental backup and you are back in production.”

Folds says he'll be looking at esxRanger Professional, which Vizioncore is set to release this week. EsxRanger Professional links with VMware's Virtual Center, software that manages and monitors virtual machines and, with VMotion, can move running virtual machines from one physical system to another.

In addition, esxRanger Professional includes database and reporting functions that give users tools to log backup times, monitor compression, check on the status of backups and record the location of virtual machines on different storage logical unit numbers (LUN).

Analysts say Vizioncore is focusing on a good area, as interest in server-virtualization technology is on the rise, and VMware holds

about half of the market. Since Vizioncore released the GUI for esxRanger about a year ago, it says it has signed up 700 customers, including Avon, Coca-Cola and Gap.

The reason is that as users combine VMware with increasingly powerful x86 platforms to consolidate important business workloads, they're finding that the need to protect data on those systems is critical, says Charles King, principal analyst at Pund-IT Research.

“If businesses are relying on x86 systems, where do they go for innovative solutions, such as for disaster recovery?” he says. “That's where [Vizioncore] can fit in.”

EsxRanger is priced at \$300 per ESX Server CPU, and esxRanger Professional is priced at \$500 per ESX Server CPU. Both products tie into higher-level management and disaster-recovery tools from companies such as CommVault, EMC, HP, IBM and Veritas, Bieneman says. ■

New appliance gets a grip on e-mail archives

BY DENI CONNOR

Clearwell Systems last week introduced its first product, an appliance designed to save customers time and money managing and analyzing e-mail for regulatory compliance and other purposes.

The company, backed by \$4 million in funding from Sequoia Capital, says its Email Intelligence Platform sits on an Ethernet network and discovers, organizes and analyzes e-mail, attachments and instant messages. Company executives relate the product to business-intelligence offerings that extract information from relational databases.

The Clearwell appliance analyzes messages and attachments in Microsoft Exchange databases and other e-mail stores, crawls messaging directories, and applies algorithms to sort messages and data. It creates a map of employees in an organization who are using mail and indexes the message stores. The appliance can process thousands of messages at a time, not batches of 10 to 20, as do legal-discovery packages, such as MetaLINC or Stratify.

Constellation Energy, a Clearwell customer, says it had 225 requests to recover and analyze e-mail last year.

“Finding the proverbial e-mail in the

haystack and being able to identify all the players, all their attached documents and all their conversations was becoming significantly more onerous and costly,” says John Petrucci, director of enterprise security for the Baltimore-based energy company.

Constellation uses HP's Reference Information Storage System to archive e-mail, but can't use it to easily search and analyze messages, he says. A dashboard program with Clearwell's product enables Constellation to identify business risks based on messaging analysis, Petrucci adds.

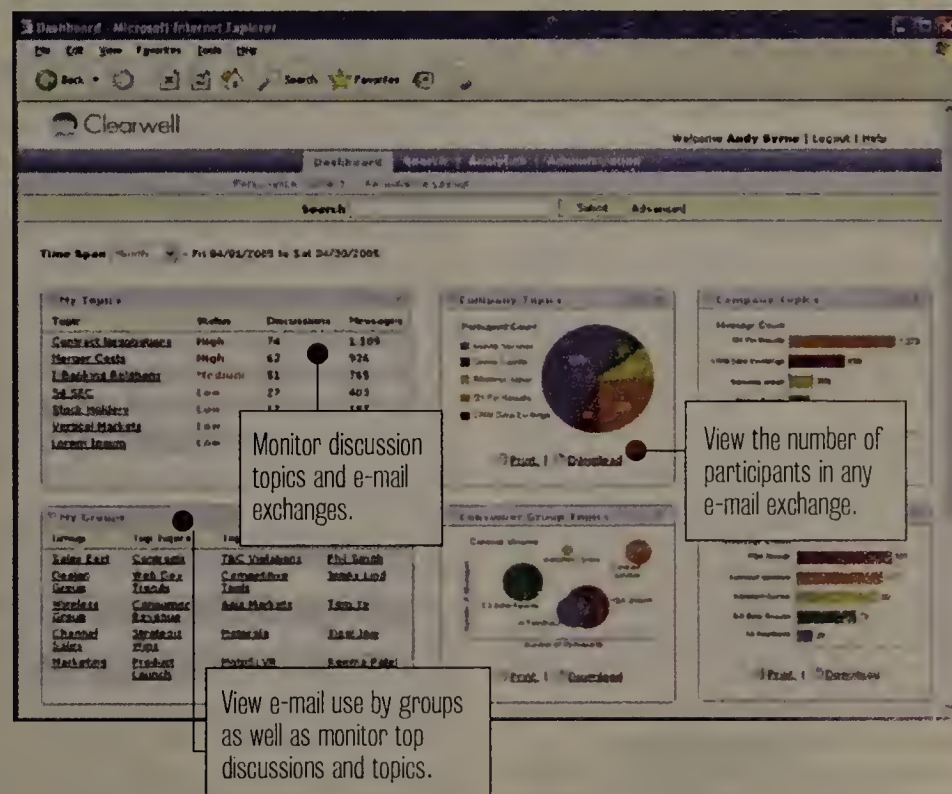
Among Clearwell's competitors are companies such as EMC and Symantec whose products discover e-mail but require human review to analyze it. Clearwell says its appliance is more sophisticated and scalable than its competitors' in analyzing and correlating e-mail trails, number of discussions and topics.

Software that allows only keyword searches of e-mail does not have sufficient complexity to perform searches and retrieval of messages needed for regulatory compliance or evidentiary discovery, the company says.

The starting price for the Clearwell Email Intelligence Platform is \$50,000 for 100GB e-mail analyzed. ■

Messaging master

Clearwell's Email Intelligence Platform appliances come with a dashboard designed to help IT departments better manage e-mail.



SPECIAL FOCUS

WIRELESS E-MAIL

Mobile messaging hits critical mass

BY JOHN COX

Wireless e-mail has become so critical to the District of Columbia that its IT group is crafting its own failover system to ensure messages can get through in an emergency.

"When you're talking about 1,300 users, many of them top managers and first responders, the wireless e-mail system has to perform," says Rob Mancini, program manager, citywide messaging for the Government of the District of Columbia. "We're very focused on emergency services."

The district's corporate e-mail server is Microsoft Exchange. But to keep frontline users up-to-the-second, it relies on Good Technology's software and service to transmit Exchange e-mails to a range of handheld devices over a cellular network.

But neither Good Technology nor the district's previous vendor, Research in Motion (RIM), has a built-in failover capability, Mancini says. The district plans to link the internal Good Technology servers on its storage-area network with servers elsewhere via NSI Software's Double-Take data replication software. Double-Take will continuously copy the wireless e-mail traffic to the back-up servers. The failover capability is scheduled to be in place by September.

Such high-level data protection indicates the growth in numbers and importance of wireless e-mail in the enterprise. Gartner

for carriers, which install the software and sell wireless e-mail services to businesses and consumers.

One of the most important of these developments was Microsoft's release last October of Service Pack 2 for Exchange Server 2003. This software for the first time lets Exchange directly deliver e-mail to and from Windows-based mobile devices without the need for extra middleware or third-party licenses on top of Exchange, as required by such vendors as RIM.

But the new service pack requires that handheld devices run Microsoft's Messaging & Security Feature Pack, which runs only on Windows Mobile 5.0, released in November. The first of these handhelds are now coming to market, but many of them are expected.

"Microsoft has taken synchronization and push e-mail and built them into Exchange and [Windows-based] devices: it's become a commodity," says David Via, an analyst with Ferris Research.

Industry consolidation

Last October, Sybase's iAnywhere division acquired Extended Systems, which offers the OneBridge software for wireless e-mail and other messaging functions (iAnywhere had been reselling Intellisync's Mobile Suite for wireless e-mail and hasn't clarified its plans about these two offerings). A

Reasons for going mobile

A ranking of the most valuable applications, if accessible from a mobile device:

1. Enterprise directory
2. Customer relationship management
3. Instant messaging

SOURCE: ENTERPRISE MOBILE MESSAGING SURVEY, JANUARY 2006; FERRIS RESEARCH, SAN FRANCISCO. BASED ON AN OCTOBER-NOVEMBER 2005 SURVEY OF 31 COMPANIES OF 1,000 OR MORE EMPLOYEES.

server through Microsoft Exchange collect voice mails left on a user's VoIP desk phone, and then wirelessly send them as a .WAV file attachment to a standard e-mail. With a client voice mail player from a company such as MotionApps, mobile users can play the message on a Windows Mobile or PalmOS handheld.

RIM and Microsoft announced last April a joint effort to extend enterprise IM to subscribers of RIM's BlackBerry service. The two vendors plan to link Microsoft Office Live Communications Server 2005 with the BlackBerry Enterprise Server, which would let BlackBerry users transmit IMs with co-workers and customers while on the road.

After seeing this synergy between wireless e-mail and IM, some companies are forging ahead on their own with these kinds of extensions.

The District of Columbia has a project to create software that will tie IM clients on handhelds together through a database of IM addresses based on the district's Lightweight Directory Access Protocol directory service. "I'm a very happy Good customer," Mancini says. "[But] I wish someone had developed an IM component and married it with Good's wireless messaging platform."

Enterprise users are increasingly requiring more control over the end device, and that control is being incorporated in the messaging infrastructure. When RIM released BlackBerry Enterprise Server 4.0 late in 2004, it let users for the first time synchronize e-mail and other data wirelessly. And that, in turn, extended enterprise IT control over the devices.

"RIM and the other vendors recognize that these devices are being used as [daily] work tools, and they're giving customers the tools to better manage them," says Frank Gillman, director of technology at Allen Matkins LLP, a Los Angeles law firm, where

about 250 attorneys now handle about 5 million wireless e-mails a year.

Remote management lets Gillman instantly wipe a lost or stolen BlackBerry clean of e-mails, addresses, contacts and other data. "[If] the BlackBerry is still on the air, I can blank it out, kill it," he says. "You could never do that before. You can manage all this without having the unit in your hand or in a cradle."

The priority for Gillman and the District of Columbia's Mancini has been wireless e-mail. Currently neither is using his wireless messaging infrastructure to access other enterprise applications. But more advanced handheld devices, with more power and built-in features, are likely to push them in that direction. "Users are pushing us to do more and more on these devices," Mancini says. "I'm very interested in [accessing] the back-office stuff."

"A lot of BlackBerry users are executives who are using this tool for e-mail and then think, 'why can't I get my sales orders on this device?'" says Tom Blake, vice president of business development for Dativoci, a St. Louis software developer. "Companies are trying to do more with the device and the [wireless messaging] platform they've already invested in."

Dativoci programmers are working with RIM's recently released Mobile Data System (MDS) Studio toolkit to create two applications that will make use of the BlackBerry Enterprise Server behind a corporate firewall. One is a program that lets field sales staff take orders and check inventory database with a BlackBerry device on a cellular network. The second will give construction inspectors forms and checklists to report on project status.

"MDS Studio creates a framework for building applications," says Joe Dent, a senior software engineer with Dativoci. "A lot of the network infrastructure, like guaranteed delivery, secure data packets and protocols like [Simple Object Access Protocol], is bound into the Studio. In the past, we had to code all that by hand." ■

"[If the lost or stolen] BlackBerry is still on the air, I can blank it out, kill it. You can manage all this without having the unit in your hand."

Frank Gillman, director of technology, Allen Matkins

analyst Ken Dulaney, in an October 2005 report, estimates that by the end of 2006, the number of wireless business and consumer e-mail users will about double to 16 million. By the end of 2008, Gartner estimates that half of all employees who access e-mail via a wired PC also will have access to wireless e-mail on some type of handheld device, probably a smart phone.

In response to this growth, vendors are recasting themselves through mergers and acquisitions, and through new product features. Behind-the-firewall vendors, which offer server-based software for the enterprise, include Good Technology, iAnywhere, Intellisync, Microsoft and RIM.

Several important vendors, such as Seven Networks and Visto, offer similar products

month later, Nokia said it would acquire Intellisync, in an effort to give Nokia handhelds new messaging, management and security features.

Earlier in 2005, Good Technology bought JPMobile for its wireless support for Lotus Notes Domino and GroupWise and for its ability to tie them into its GoodLink wireless e-mail server.

The consolidations are part of a related trend by the surviving vendors: A race to support more devices, more networks, more corporate e-mail systems and more kinds of communications, such as instant messaging and telephone voice mail.

Good Technology, for example, announced in August a project with Cisco and Avaya that would let the GoodLink

nww.com

Cox on wireless

To keep up with mobile technology, read John Cox's daily blog on wireless.

DocFinder: 1926

APPLICATION SERVICES

■ CRM ■ MESSAGING/COLLABORATION ■ WEB SERVICES ■ ERP ■ E-COM ■ NETWORK AND SYSTEMS MANAGEMENT

Short Takes

■ **IBM** unveiled **Lotus Sametime 7.5**, an improved version of its **enterprise instant-messaging** platform last week, and announced the integration of Sametime with public IM services from AOL, Google and Yahoo. Version 7.5 has a new multiprotocol gateway that will allow communication with users on public IM networks, AOL's AIM and ICQ, Apple's iChat, Google Talk and Yahoo Messenger. There was no mention of connecting Sametime with MSN Messenger. Other enhancements in Sametime 7.5 include a refurbished user interface that will resemble those of public IM applications, improved privacy and security capabilities, embedded VoIP support, and client-side support for Apple's Mac OS X 10.4 and Linux. Pricing for Lotus Sametime 7.5 will be announced when it ships in mid-2006, according to IBM.

■ **AlterPoint** last week announced it has upgraded its flagship **Device-Authority** change and configuration management software to enable role-based management, device life-cycle tracking and user-action auditing. The company also has added features to DeviceAuthority 4.0 specific to managing compliance. For example, companies can customize user permission and roles-based access to devices in an effort to increase control and decrease errors. Also AlterPoint has enabled third-party systems such as Microsoft Operations Manager to incorporate DeviceAuthority's activity logging, and has added integration with TACACS+, RADIUS and CiscoSecure Access Control Server. The DeviceAuthority Suite includes a server, a set of adapters and an Open Database Connectivity-compliant database. It has two application components, the Audit Module for inventory reporting and the Update Module, which automates mass configuration changes across any range of devices. Device-Authority 4.0 is priced starting at about \$20,000.

Microsoft upgrades license program

BY JEREMY KIRK, IDG NEWS SERVICE

Microsoft is planning to beef up the features of Software Assurance, the company's maintenance and upgrade program that has been criticized for its expense and slow follow-up with new products.

Begun in 2002, the program streamlined what was often a complex and expensive licensing routine for Microsoft products. Licensees who purchased Software Assurance received training and support and could upgrade their programs at no cost when new versions were released.

Customers increasingly questioned Software Assurance's value, however, as Microsoft delayed the release of certain key products such as its Windows Vista operating system and SQL Server 2005.

In March, Microsoft will offer several enhancements to make customers feel they are getting more value from their Software Assurance package, says Amanda Abel, head of licensing and software asset management for Microsoft U.K. The price of

Software Assurance will not change, she says.

Many of the changes in the program come from customer feedback, Abel says. One major change is that Microsoft will pay for one of its partners to visit organizations that have Software Assurance and conduct workshops to train employees on new versions of software; the length of training will depend on the Software Assurance package, she says. In the past, Microsoft would recommend training partners, but organizations had to pay.

Another new feature is that employees working for companies with Software Assurance will be eligible for discounts on other software for personal use. Other initiatives include increasing promotion of already-existing Software Assurance benefits, such as the right of an organization's employees to install software at home that their employer holds licenses for, Abel says. Microsoft is pushing hard to figure out ways to reduce piracy and the use of unlicensed

software. Sacrificing some revenue in exchange for getting consumers accustomed to getting legal software is "more important from a long-term revenue perspective," Abel says. "It's a great way for those people to get legal software on their PCs."

Another change is that organizations won't have to purchase a second license for an unused back-up server, Abel says. Previously, organizations had to possess a license for each server, even if one was sitting on a shelf in case another crashed.

Microsoft also will allow customers to preview early versions of software in beta trials and give them a clearer road map for products. "We've been quite bad at that traditionally," Abel says.

Customers who have Premier Support can substitute Software Assurance support credits for special help, reducing their costs, she says. Telephone support has been expanded to 24 hours a day for all Microsoft products eligible for Software Assurance. ■

Mirapoint revs up messaging appliance

BY CARA GARRETSON

E-mail vendor Mirapoint this week will announce an upgrade to its RazorGate messaging security appliance that has a smaller footprint but offers better performance and more storage capacity than the previous version, according to the company.

The appliance, which is available in three configurations to fit different-sized organizations, now offers 40% greater throughput and as much as 225GB of onboard storage, says Craig Carpenter, Mirapoint's director of corporate marketing. Mirapoint has shrunk the size of the appliance from a 3U chassis to 2U or 1U, which reduces the need for rack space and power, but has kept the price the same, Carpenter says.

The new RazorGate also has a setup wizard that requires minimal technical knowledge to get the appliance up and running, Carpenter adds.

These enhancements are designed to help Mirapoint compete for corporate customers against appliance makers such as Barracuda, CipherTrust, IronPort and Proofpoint.

Unlike those companies, Mirapoint also offers an e-mail server appliance, making it

Processing power

According to Mirapoint, the upgraded RazorGate e-mail appliances can process 107 messages per second, and more than

9 million
messages per day.

one of the few companies to have established itself in both the e-mail server and gateway markets. This distinction will become particularly important when Microsoft releases Exchange 12, which is expected to include some of the gateway security functions that Mirapoint and other messaging security companies offer, says Maurene Caplan Grey, principal analyst with Grey Consulting.

"Exchange 12 will include integrated edge services, and we're going to see this as a trend with other e-mail servers-software packages, so Mirapoint is well ahead of the game," Grey says.

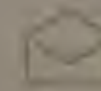
Another distinguishing point is that Mirapoint's e-mail server is offered only as an

appliance and, although the messaging security market is full of appliances, this form factor is rare among e-mail server offerings, Grey adds.

"Not too many organizations really get the idea of a mailbox appliance," she says. "They're used to thinking about messaging as a piece of software that you install on your server and the system engineer takes pride in the fact that he can play with the software and tweak it."

For a function such as e-mail, however, which is moving from the application to the infrastructure level, "it's a commodity that they really shouldn't be futzing around with if it works," she says.

RazorGate includes anti-spam and anti-virus software; Mirapoint's connection-management technology, which drops connections from known spamming sources; junk-mail management tools for users; content filtering; and policy management features. It starts at \$4,800 for 50 users. ■



MESSAGING

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NET INSIDER

Scott Bradner

King George I on privacy

could easily lead to an attempt at a fundamental realignment between the rights of the individual and the government.

In an attempt to rescue a 'Net censorship law that the Supreme Court had tossed out, the government used a subpoena (see www.nww.com, DocFinder: 1924) to ask Google and the other search engine companies for a whole pile of information about how people search the Web and what they find.

The original request to Google was for "[all] URLs that are available to be located on your company's search engine as of July 31, 2005" and for Google to "produce an electronic file containing [all] queries entered into the Google engine between July 1 and July 31 inclusive."

All in all, a huge amount of information. The subpoena said

that the government wanted just the search strings "without any additional information that would identify the person who entered any individual search string." Google said no; AOL, Microsoft and Yahoo all said yes to similar requests.

What is the problem with these requests, considering that the government is specifically asking that identifying information be removed? Leaving aside the fact that many searches do reveal personal information about the searcher, it's very hard to figure out just what the government is trying to prove with an analysis of this information.

The law that was overturned required that Web sites with naughty material on them use a form of positive identification to be sure that a child was not trying to access them. The court said

local filters were a way to get to the same place while interfering less with the constitutionally protected rights of Internet users who were not children. The analysis of the search terms could — not shockingly — show that people look for naughty things using Google. (Note that a local filter could block such searches.) An analysis of URLs might show that some of them contain naughty words. That too is hardly a shock and also something that a local filter can block.

I'm left with the nagging feeling that the case is just an excuse to find out if there are characteristics of search strings that can be used to ferret out bad guys of one sort or another. If the government thinks that turns out to be the case, how long will it be before the government "asks" the search companies to become its agents

and turn over additional information that would identify the person who entered specific search strings in the future? In fact, if the analysis of this set of data finds suspicious searches, do you really expect the government not to demand information on who did the search?

It is a natural thing for governments to think that the privacy of the individual is an impediment to security. They thought that in the time of King George I, and little has changed.

Disclaimer: Harvard has been a witness to this tendency since long before the first King George, but the above is my own nagging feeling.

Bradner is a consultant with Harvard University's University Information Systems. He can be reached at sob@sobco.com.

At first the news of the U.S. government asking Google for a week's worth of everyone's Internet searches was mostly astonishing in how unexpectedly expected it was. Since the Internet has been made the bogeyman for just about every ill that troubles mankind, why not get a head start by finding out in advance what everyone is looking for?

The details behind the headlines, when they came out, mostly added confusion. This case may turn out to be far less than it first appeared, but it

HP adds integration, eases HP-UX mgmt.

BY DENISE DUBIE

HP recently announced a software feature that lets users more easily control secure access to resources on HP-UX machines. The feature — HP-UX 11i Identity Management Integration (IdMI) — will make it possible for HP-UX customers to manage user privileges, accounts and identities across multiple servers using it and HP's OpenView Select Access identity and access-management software.

After coupling the code for IdMI with Select Access, customers can manage user access to their HP-UX servers centrally, according to HP. Customers can download the code for free from HP's Web site; Select Access must be purchased separately.

HP-UX administrators previously had to access each machine individually to update access policies. "Unix systems in the past [were] managed on a one-off basis. Each system had an administrator, and the administrator was responsible to manage the accounts, passwords and identities of the [system's] users," says Phil Schacter, vice president at Burton Group. He says that HP should consider adding this type of integration to its other systems. HP representatives say the company would consider doing so based on customer demand.

With IdMI, customers tap the enforcement, authentication and policy-based management features in Select Access. They down-

load and install the IdMI code on the HP-UX servers to be managed, and then configure Select Access, which is installed on a dedicated server, to manage the servers running the integration code. Administrators can add access policies and rules, define user privileges and change access rights to servers on a one-to-many basis. They also can group servers and assign access and authentication policies based on predefined rules for the group, HP says.

"HP is adding simplicity for HP-UX customers who also buy HP's management software. They can overlay this ID management tool for the operating system and reduce wasted resources on server management," Schacter says.

The HP OpenView Select Access suite competes with products from BMC Software, CA, IBM, Microsoft and Sun. Select Access 6.0 starts at \$6.75 per user. ■

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IBM buys IT resource-tracking company

BY DENISE DUBIE

Looking to add financial management services to its IT management products, IBM last week announced it would acquire CIMS Lab, which makes software that tracks the use of computing resources in virtualized technology environments.

With this software acquisition, its 12th since the start of 2005, IBM picks up more management tools for its Tivoli division and rounds out its virtualization offerings. The deal will equip IBM with the technology to gather usage data from multiple IT resources — servers, storage, networks, databases, applications and operating systems — and attach a financial value to it. Financial terms of the deal were not disclosed.

The CIMS Lab software collects usage data and associates a cost with it, IBM says. According to an IBM press release, the software "can help companies understand more easily how their technology resources are being consumed," specifically across virtualized environments.

CIMS Lab's operations, located in Roseville, Calif., will be integrated into IBM's Tivoli division, which is under the direction of General Manager Al Zollar. Its software will be integrated with IBM Tivoli's IT service management portfolio, giving Big Blue an accounting and chargeback product. HP acquired similar

technology with its purchase of Peregrine Systems last year; in November, CA detailed how it would add financial and accounting features to its Asset Management 11 software.

"Keeping tabs on IT costs is daunting for any organization facing a maze of platforms and systems that traditionally have been tracked separately and manually," Zollar said in a press release. "CIMS Lab software helps companies take control of their IT costs — a key advantage of IT service management."

The CIMS Lab technology will be incorporated across IBM's software, hardware and services, the company says. Immediate plans are to ship the technology with IBM Director, "complementing the virtualization capabilities of xSeries eServers and pSeries eServers."

IDC estimates that spending on virtualization will grow to nearly \$15 billion worldwide by 2009.

IBM says it plans to sell CIMS Lab software products through IBM's worldwide sales channels and IBM Business Partners. CIMS Lab has more than 170 customers worldwide. ■



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Verizon touts new business services

BY JIM DUFFY

Verizon last week launched an enterprise business unit formed following the company's acquisition of MCI, as well as two service offerings intended to show integration between its wireline and wireless networks.

Verizon Business, as the new unit is called, combines the enterprise and government customer base of MCI with Verizon's former Enterprise Solutions Group. It will focus on providing telecom and Internet services, including optical network products and data services such as frame relay, ATM and private line. Ninety-four percent of Fortune 500 companies are already customers of the unit, Verizon says.

In addition to traditional voice and data services, Verizon Business will offer enterprise customers managed WAN and LAN services, VoIP services and telecom equipment. Building on MCI's "robust suite" of VoIP services, VoIP will be a major area of focus for Verizon Business, says Ed McGuinness, chief marketing officer.

The two services launched last week are Enterprise Mobility solutions — based on the former MCI's remote access suite — and Broadband Wireless Access for Business Continuity and Disaster Recovery. Enterprise Mobility uses Verizon Wireless' evolution-data optimized (EV-DO) broadband wireless service to enable remote workers to securely access corporate systems and the Internet in 181 U.S. metropolitan areas, Verizon says.

Access is enabled through a Verizon Wireless Broadband Access/National Access PC card that slides into most laptops, and through the Enterprise Mobility user interface, which handles connectivity administration and establishes security parameters.

The business continuity/disaster recovery service combines Verizon Wireless' EV-DO network with MCI's IP VPN and Secure Gateway offerings. This service is designed to provide companies with a wireless backup for their data networks.

Secure Gateway Services allow customers to connect private and public IP networks securely. Customers can use wireless as a back-up connectivity option should their primary landline connection become unavailable.

The new back-up services are expected to be available next month.

Analysts say these services complete an effort MCI had previously undertaken, and attempt to match current offerings from competitive carriers.

"Finally, [Verizon is] getting the wireless part of the business and the VPN part of the business talking to each other," says Lisa Pierce, an analyst at Forrester Research.

"This is behind what Sprint has been doing and even behind, to some extent, what Cingular has been doing, although Cingular hasn't been able to do it as a single company, she adds. Cingular is co-owned by AT&T and BellSouth.

Pierce says roaming issues and different wireless technologies deployed internationally may limit the new Verizon Business services to North American use even though a "substantial

percentage" of MCI customers are multinational corporations.

"Data roaming means you look at [Global System for Mobile communications] types of service more often than not," she says. "That literally means that someone has to look at a different carrier. [Verizon Business services] probably would be embraced more enthusiastically by domestic enterprises."

Nonetheless, these services are a positive first step in what will be a wave of new services from the combined carriers, says Jeff Kagan, an independent telecom analyst.

"It's going to take a while for the company to totally integrate MCI," Kagan says. "Until then, it will be MCI continuing to operate as usual, just owned by Verizon."

IDG News Service contributed to this story.

New from Verizon

Services offered by Verizon Business include:

Enterprise Mobility

- Enables customers to use Verizon Wireless' EV-DO broadband service to securely connect to corporate systems.
- Provides connectivity from more than 150 countries.

Broadband wireless access for business continuity and disaster recovery

- Redundancy provided through Verizon's IP VPN Broadband and Secure Gateway.
- Additional protection against last-mile-related outages by bypassing local landline facilities.

EYE ON THE CARRIER

Johna Till Johnson



I wish I had a nickel for every time an IT executive told me he wanted "better managed services" from providers. Yet this perennial request seems to be perennially unanswered by service providers: Nearly half of the companies I work with are looking for their carriers to offer better managed services (in some types of companies, such as those with distributed knowledge workers, the percentage is as high as three-quarters). Obviously, the carriers are failing somewhere.

Part of the problem is a fundamental disconnect between providers and users when it comes to the definition of a "managed" service. Providers tend to think that if they provide statistics on circuit and device uptime, along with the ability to troubleshoot and reconfigure malfunctioning components, they're "managing" the service.

Users have a broader definition: A managed service is one that ensures that critical applications are performing effectively for users. Moreover, they feel that a managed services provider should detect issues that compromise business functionality and take immediate action, not wait

Managing the providers of managed services

to be informed. Carriers clearly need to get with the program when it comes to understanding — and implementing — user requirements.

But part of the problem also lies with IT executives, and it's a symptom of an overarching problem. Managed services are a form of outsourcing, and most companies do an extremely poor job managing outsourcers. Dissatisfaction with outsourced services overall runs as high as 75%, depending on whose figures you believe.

The major problem, from what I can see, is that IT departments have gotten too good over the past few decades. Most IT executives I know have a broad understanding of the specifics of their organizations' businesses, and the role IT plays in ensuring the success of that business. Their detailed customer knowledge and insight would probably amaze the marketing and sales department. They understand operations and ROI as well as the folks in finance and operations. They'll often go above and beyond to make sure the technology's in place to maintain a competitive advantage — often without being asked, and sometimes in the face of resistance from lines of business

whose employees may not fully understand how technology can help them.

The catch is, when IT departments turn over some or all of their functions to outsourcers, they subconsciously expect the same dedication to detail and attention to the bottom line that they themselves deliver. And that's not likely to happen: Outsourcers need to pay attention to their own companies' bottom lines. As they say in economics class, the interests of outsourcers and IT organizations are not necessarily aligned.

How can IT executives keep those interests aligned? The first and most critical step lies in architecting an agreement that provides incentives to outsourcers to meet the business needs of their customers. One airline I know pays its outsourcer based on the percentage of on-time flights in a given month, for example. The second step is to invest in effective people and product management. How? Stay tuned.

Johnson is president and senior founding partner at Nemertes Research, an independent technology research firm. She can be reached at johna@nemertes.com.

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BUSINESS SOLUTIONS



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■ PRODUCTS, SERVICES AND STRATEGIES FOR TYING TELEWORKERS TO THE ENTERPRISE

Call centers are heading for home

BY ANN BEDNARZ

When they're not on the road for a service call, but they are on the clock, field technicians for Aspect Software pitch in handling customer calls that require technical expertise. They can take calls from their homes or satellite offices. Either way, adding to the pool of agents is no big deal, says Gary Barnett, CTO at Aspect.

Routing calls to employees working from home "is just about as simple as it is to set up agents in a building," Barnett says.

Aspect, which makes call center software, has been routing customer calls to employee homes for years. As a technology provider in the call center market, Aspect is a natural fit for the leading edge of a trend to extend call centers beyond the confines of brick-and-mortar facilities.

Others are catching on to the idea. Over the last few years, more companies have built virtual call centers by outfitting agents to work from their homes. IDC calls the trend "homeshoring" and says it will continue to gain momentum.

Home-based agents represent a small fraction of the 4 million-plus people who work in call centers in the United States. Some companies, such as JetBlue Airways, use their own home-based agents. Others hire outsourcers that use home workers.

There are about 112,000 outsourced home-based agents in the country, according to research from IDC. By 2010 IDC

Virtual call center ranks on the rise

The number of home-based agents fielding customer calls will grow by 24% each year through 2010, IDC predicts. Driving growth is the opportunity for companies to employ more productive agents, achieve higher retention rates and respond with greater flexibility to peaks and valleys in voice traffic, the research firm says.

Home-based agents*



* FIGURES AVAILABLE FOR OUTSOURCED AGENTS ONLY.

expects that population will surpass 300,000. No figures are available for home-based agents who are employed by businesses running their own call centers.

Alpine Access, LiveOps, West Corp., Willow CSN and Working Solutions are among outsourcing firms that hire or contract with agents working from home. Some of their customers that have bought into the idea of home-based agents include 1-800-Flowers, the Internal Revenue Service, J.Crew, McKesson Health Solutions and Office Depot.

Driving the demand for home-based agents is the desire to streamline costly call center operations. Call centers typically are challenged to find more-productive agents, achieve higher retention rates, and find ways to deal with spikes and lulls in voice traffic. Using agents who work from home provides a way to deal with some of these challenges.

Because at-home jobs are in demand, companies that hire home-based agents have a larger pool of more-qualified candidates to choose from, experts say. In addition, companies can lower facility costs by shifting staff to home-based workstations.

A big draw for companies and agents is the flexibility for home-based agents to take calls for short periods of time, during call peaks. In a traditional call center, it wouldn't make sense to have an agent drive to work just to take calls for 20 min-

utes. Round-the-clock scheduling also is easier with a geographically distributed workforce.

Economic trends are helping to drive growth of home-based agents, says Stephen Loynd, a senior analyst at IDC. High gas prices and costly living expenses in urban areas combine to make home-based work attractive, which adds to the high retention rates companies achieve with virtual call center employees. Traditional call centers report huge turnovers, in some cases approaching 80% to 100% annually. Conversely, virtual call center outsourcer Willow has a 15% annual attrition rate.

Willow, which was acquired last year by Accretive Technology, ended 2005 with 35 clients and 3,000 at-home agents, all of whom are independent contractors. The company expects to add 4,000 home-based agents to its ranks this year, culled from five times as many applicants, says new CEO Angela Selden.

About 15% to 20% of applicants make it through the company's rigorous screening process, Selden says. The average agent age at Willow is 38. About 65% have college degrees, 75% have sales experience and 50% have management experience. "The quality of these folks far surpasses the average quality that you can attract to a physical, geographic location," Selden says.

Technology advances also are helping to

propel adoption of the home-based agent model, Loynd says. For example, VoIP technology makes it easier for people to work out of homes, he says.

But VoIP is by no means a prerequisite. Willow, for example, doesn't route calls over IP networks. The technology isn't dependable enough, Selden says. "Right now, what we've discovered is that voice over IP still has enough instability that it doesn't provide us with the level of service our clients expect. As voice over IP stabilizes and becomes more reliable, it could become an alternative for the future."

Broadband is a prerequisite for Willow, however. Agents need broadband to access call center applications containing customer information and scheduling features, for example.

The availability of Web-based applications is driving use of home-based agents, Aspect's Barnett adds. Being able to get data to home users reliably and in a secure fashion makes using home-based agents feasible, he says. "It didn't do much good to have a call center agent who was able to talk from home but didn't have access to the data that he needed, such as who a customer is and order-status information," he says.

In addition, previous billing practices would have meant that telephone calls routed from a call center to a home office would incur a metered charge for traveling over the public network, Barnett says. "Now with many different fixed-cost options and voice over IP, it's no more expensive to get that voice out to a home than it is to get it to a desk in the office."

In the big picture, experts view homeshoring as a complement to offshore outsourcing. Judicious use of both options lets companies distribute call center work where it makes the most sense. For example, offshore agents may be best suited for calls that don't depend on cultural knowledge, while at-home agents in the United States may be appropriate for calls that require local or geographic expertise, such as roadside assistance.

The price of a home-based agent falls somewhere between in-house and offshore options, Loynd says. "It's going to be cheaper, on average, to have a home-based agent than to have them working in a U.S. call center, but not as cheap as going to a place like India," he says. ■

Short Takes

■ **Microsoft** is offering a new set of online resources and technical support for small businesses. **Small Business Plus** includes personalized content and technical support. Customers can sign up for free, at www.nww.com, DocFinder: 1925, to access online tech support and a self-service environment for answers to questions about products, as well as other services. Small Business Plus comes in three iterations, each with a yearly fee. Bronze comes with six online chats for \$149; Silver with unlimited chats for \$299; and Gold with unlimited chat support with phone support for \$499.



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TECHNOLOGY UPDATE

■ AN INSIDE LOOK AT TECHNOLOGIES AND STANDARDS

SAS enhances RPR routing

BY JIM MCKEON

The Resilient Packet Ring standard, IEEE 802.17, combines the reliability, service guarantees and management capabilities of SONET with the statistical efficiency of packet networks. A key new optimization of the technology, the Spatially Aware Sublayer, 802.17b, provides spatial reuse of the ring bandwidth via Layer 2 bridging.

Spatial reuse refers to the ability to send packets on only a portion of the ring circumference rather than around the entire ring, thus conserving bandwidth. By substituting simple Ethernet switches for expensive Layer 3 routers as ring elements, this new technology makes RPR an attractive solution for large companies and service providers.

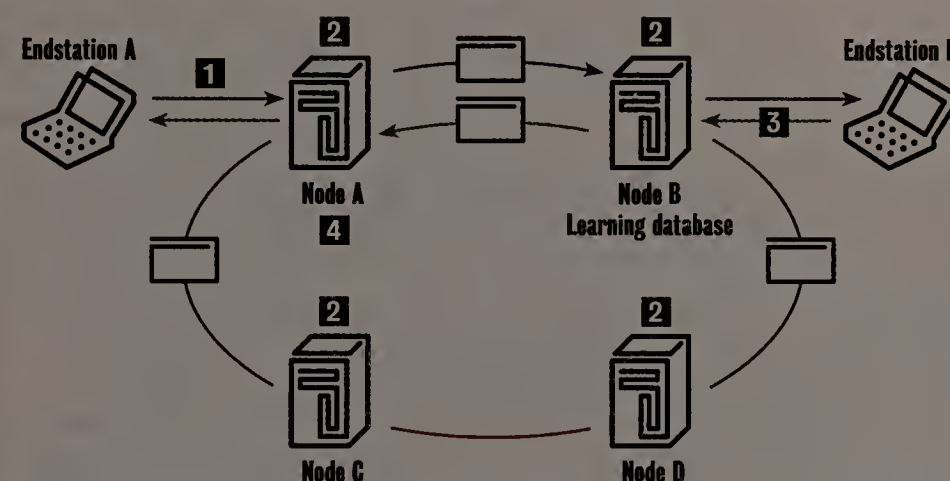
The IEEE's 802.17 Working Group began the standardization process for SAS following the ratification of the RPR standard in June 2004. Progress was swift; the current draft is stable and should be ratified in the second half of this year. With the technical details largely agreed on, products are shipping today that embody the standard and provide Layer 2 bridging in RPR.

Virtual bridge

An SAS-enabled RPR ring can be thought of as a virtual Ethernet bridge, with bridge ports represented by the nodes of the ring. The function of the technology is to allow the ring nodes to learn the Ethernet addresses of the endstations connected to them and then to make switching decisions based on this knowledge. When a destination address is

HOW IT WORKS: 802.17b

802.17b enhances the Resilient Packet Ring (RPR) standard to provide spatial reuse of bandwidth via Layer 2 bridging.



- 1 Unknown endstation A sends packet to unknown endstation B. The first time an unknown packet enters the ring, it is sent to all stations.
- 2 Each station in the ring learns the source address and RPR node where this packet entered the network.
- 3 The ingress RPR Node B queries its learning database and recognizes that endstation A corresponds to node A, then encapsulates the packet with RPR destination address A. Endstation B replies with packet to endstation A.
- 4 Packet travels only to this node, achieving spatial reuse.

encountered for the first time, the packet containing that address is sent to all stations on the ring. The graphic above illustrates this process.

As each station receives a packet, it learns the Ethernet address and corresponding RPR node for the endstation

that originated the packet. Subsequently, when a packet arrives at the ring with this endstation address as its destination, the ingress RPR node searches its learning table and addresses the packet to the corresponding RPR node. RPR is specified with an extended header format that

allows packets to be encapsulated with addresses in the RPR domain while retaining their original Ethernet addresses, which results in a transparent Ethernet transport.

Key benefit

The key benefit this process provides is spatial reuse — stations send traffic around the ring only to the node corresponding to the packet's destination. Without this knowledge, a Layer 2 RPR ring would be forced to broadcast all packets to all destinations on the ring.

The original RPR specification primarily imagined Layer 3 routers for ring nodes, which can achieve spatial reuse by directing packets only to the next hop on their routes. But requiring routing in ring nodes precludes RPR from many cost-sensitive applications and adds complexity. SAS-enabled RPR melds the economics of Ethernet with the reliability and operations support of SONET.

With the SAS enhancement, RPR network designers no longer face the no-win proposition of achieving spatial reuse via expensive Layer 3 routers or deploying an inefficient broadcast ring. Now Layer 2 Ethernet switches or transport equipment can be easily incorporated into RPR rings, extending the viability of RPR into service provider and large corporate networks.

McKeon is a product manager for Ethernet devices at Cortina Systems. He can be reached at jim@cortina-systems.com.

Ask Dr. Internet

By Steve Blass

We would like a RAID system to provide data protection in a small office. Can you say whether a hardware or a software RAID system is a better option? Also, is RAID 1 or RAID 5 the more reliable system for protecting our data?

The specialized equipment means hardware RAID controllers are usually faster and more expensive than software RAID systems. I prefer to use a hardware RAID controller when possible because of the performance improvement. Software RAID is an affordable

alternative, though, and delivers acceptable performance. Software RAID can be used with one or more hardware RAID controllers to implement multiple levels of protection.

The various RAID levels use different arrangements to protect data. RAID 0 spreads your data across disks in "stripes" and provides no fault protection, but it can provide high-speed disk I/O. RAID 1 mirrors your data across disks to provide a complete duplicate of everything. RAID 5 combines striping and mirroring to allow an array to keep delivering data if one drive fails.

Whether RAID 1 or RAID 5 is more reliable depends on whether you are more interested in having a complete back-up copy available on one or more disks or in I/O performance and being able to keep running through a drive failure. RAID 5 lets you replace the failed disk and keep running while the RAID array rebuilds itself in the background.

Blass is a network architect at Change@Work in Houston. He can be reached at dr.internet@changeatwork.com.



GEARHEAD INSIDE THE NETWORK MACHINE

Mark Gibbs

DSL, Part III (in which we get back DSL)

Last week we were relating our ongoing struggles with DSL (see Gibbsblog, at www.nww.com, DocFinder: 1922, for a selection of your comments on this topic), which concluded with us being disconnected from the world. Our solution, at least until AT&T restored our service, was to set up a wireless connection to our neighbors, the commander and his lady wife, that allowed us to piggyback on their cable broadband service.

Luckily, some time ago Agere sent us a wireless bridge to review, the Orinoco Radio Backbone Point-to-Point Kit, and as happens on occasion, it got shelved long enough for the company to have sold the product line. The Orinoco brand is now owned by Proxim, and the product has moved on several generations.

Anyway, we suddenly had a really interesting reason to try out this now-antique kit. So, where to set it up?

Although the distance from the commander's house to the Gearhead Secret Underground Laboratories is perhaps 500 feet as the crow flies, a direct line of sight is hard to find as there's a lot of vegetation in the way.

We considered running Category 5 cable down the side of the commander's house to a point where there was a line of sight to the laboratory, but there wasn't a convenient source of power there. The answer would have been

Power over Ethernet, but unfortunately the only PoE adapters we could find at Fry's Electronics supported 5 or 12 volts and our bridge required 9 volts.

The other choice was a longer cable run around two sides of the house to a vantage point near a handy power point, but then we had an "aha" moment. Rather than completely festooning the house with Category 5, we could use an Ethernet bridge over the house power.

So we connected the commander's cable TV modem to a

No one at AT&T can tell us yet why we were disconnected.

Netgear wall-plugged, Ethernet-bridge transceiver and used another one of these devices outside to provide the data connection to the Orinoco wireless bridge and antenna.

To protect the electronics outside the commander's house, we put the whole assembly into a high-tech, \$7 plastic CD storage case, which we tied to a pole, and aimed the bridge's high-gain directional antenna at the laboratory.

Over there we mounted another antenna on a fence and ran 50 feet of coaxial cable into our comms cupboard. We then connected the transceiver to our gateway, reconfigured our gateway to use a dynamic address delivered from the commander's network so that we could preserve our private address space, fired it up and *voilà!* We were back online!

The connection worked pretty well, and while the wireless backbone is capable of up to 12Mbps, the line of sight was a rather narrow channel between trees, which significantly degraded the signal. We didn't have time to do in-depth measurements, but we reckon our overall throughput was around 2Mbps, more than adequate for our immediate Internet access needs.

If you care to see what the wireless-bridge installation looks like, check out Gibbsblog at DocFinder: 1923, where we have some pictures for your viewing pleasure.

What of the DSL connection, you might be wondering. Well, contrary to expectations, we were reconnected on Wednesday evening, but at 1.5Mbps instead of the 3Mbps we were sold by SBC seven months ago when we changed from a static to a dynamic IP address. Turns out we are 15,000 feet from the central office, which means we're too far for the higher data rate to work. (Do we hear a refund?)

Curiously, an AT&T tech called us a couple of days ago and ran some mysterious remote diagnostics that told him we are about 9,000 feet from the central office. When we asked why the big difference, he said his tools weren't that accurate, which begs the question, why use them?

No one at AT&T can tell us yet why we were disconnected or why it took so long to reconnect us, and our Vonage service is still flaky. Other than that, life is perfect.

More tales of the ridiculous next week. Share your angst with gearhead@gibbs.com.



CoolTools

Quick takes on high-tech toys. Keith Shaw

A new member of the Cool Tools Testing Team arrived last month, although it will be a while before Marley starts troubleshooting the home LAN routers (she mostly sleeps and eats).

Like many proud papas these days, I've taken tons of photos and sent out e-mails with photos attached. But because I'm the Cool Tools guy, I'm expected to utilize as much technology as possible to create real-time multimedia extravaganzas that show her every waking moment. Although I'm not there yet, I have used several products to get a jump-start on the whole "World, meet our baby" thing.

I bought a camcorder and took video of the baby, mostly shots of her sleeping, or just waking up, or swinging in her chair (real exciting stuff). Because Grandma and Grandpa want to see this, I needed to get the video from my camera into my PC in a quick and easy way.

Enter the **Adaptec GameBridge TV** device (\$100, ★★★★★), which bridges the connection between the camcorder and the PC. The

device and bundled InterVideo Home Theater software let you play the camcorder tape in real time and record the content on a PC in MPEG format. Audiovisual cables (composite and S-video connections) connect the camcorder and GameBridge, and a USB 2.0 cable connects to the PC. The device also accepts inputs from VCRs and game consoles, so you can transfer old home movies to a PC or record your video game play (great for bragging — see www.nww.com, DocFinder: 1927).

The next step was to take the raw video and turn it into something compelling. The last thing I wanted to do was sit

and use a video-editing and DVD-burning application, so luckily I found the **Muvvee autoProducer 5** (\$75, ★★★★★) software. This incredible product takes videos, photos and music, and combines them into a video (a "muvvee") that rivals anything you'd see on MTV. The software made it easy to drop video, photos and any music we wanted into the system; then, pushing the "make muvee" button got the ball rolling. The final muvee took the best of the photos and videos and synchronized them with the music we chose (an option tells the system to create a muvee that matches the length of the music you choose). The software includes several styles of videos to choose from, so you can make a black-and-white, detective movie-style muvee, for example. I chose the "personal video," which focuses on people's faces (good for a video about your new baby). After the system creates your muvee, it lets you tweak the video (replacing videos or photos with other clips, for example) before the final encoding takes place. The software also excelled at explaining the different codecs to record to, depending on whether we wanted to save our video in DVD or Quicktime format or send it out in an e-mail, among other options.

With my completed video, my next task is to distribute it to family members without having to send out DVDs or attach the 100MB file (the size of my 6-minute Quicktime muvee). One good way to do this is through **Orb Networks** (★★★), a free service that lets you share videos and photos with friends and family by letting them stream the videos from your home PC. I could send out an e-mail with a URL for the shared video, and they could watch it without needing to download the video.

Shaw can be reached at kshaw@nww.com.



The Muvvee autoProducer software turns video, pictures and movies into something you'd actually want to watch.



The Adaptec GameBridge let us transfer our camcorder video to the PC easily.

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On Technology

John Gallant

Cisco, Juniper face unique challenges

Two weeks ago, I had the unique opportunity of speaking with two of networking's top CEOs: Cisco's John Chambers and Juniper's Scott Kriens. They're both eyeing the same big opportunity — the next generation of your network — but face different challenges in capturing that prize.

Chambers and Kriens have a consistent view of the future: a converged, multiservices IP network that gets smarter and smarter — meaning it gets better at dealing with security threats, handling multimedia traffic, managing problems and optimizing application performance. The lines between your enterprise and service provider networks will blur, helping you better support remote workers and distributed applications.

But getting to that future won't be easy for either Cisco or Juniper. For Chambers the challenge is all about focus. For Kriens, it's about speed.

While both Cisco and Juniper target enterprises and service providers, Cisco also has big plays in the consumer and small-midsize business markets. Network lines may blur in the future, but today these four markets are distinct — different buyers, pricing and support models.

Chambers will have his arms full trying to win in all of them and to find synergies among them. Add to the mix the big acquisition of Scientific Atlanta — an out-of-character deal for Cisco — and the juggling act gets even trickier. Will Cisco's attention on enterprise customers suffer? Will it reinvest the premiums it earns from enterprise buyers or divert that money to fuel its other aspirations?

All that is not lost on Kriens, who sounded the theme of focus, focus, focus, and vowed that Juniper will not be distracted by consumer opportunities.

But focus alone won't help Juniper. Cisco has amassed an incredible arsenal of enterprise technologies and has announced major initiatives to improve security, management, data center networking and application optimization. Juniper has acquired some great technologies and it has garnered a lot of press for its increased enterprise presence. But it's not enough to espouse a similar high-level vision. Juniper needs to be clearer about its long-term enterprise strategy, how it intends to fill the gaps in its product line and how it will deliver a network that is different and better than what Cisco is proposing.

And Juniper has to move quickly. As Chambers is quick to point out, Cisco has been pulling the pieces together over many years and has built a level of rapport with enterprise buyers that's difficult for any other network company to equal. If, at this critical juncture for enterprise networks, Juniper can't lay out a clear, compelling vision of a different future it will wind up as another also-ran to Cisco.

Two smart CEOs. Two strong companies. Two challenges. This is going to be good.

— John Gallant
Editorial director
jgallant@nww.com

Opinions

The digital lifestyle

Regarding Mark Gibbs' BackSpin column "The myth of the digital lifestyle" (www.nww.com, DocFinder: 1921): I recently moved from the city to a rural area where the only broadband option is satellite. I've suffered with 28.8Kbps dial-up for the past year, no cable and only three broadcast channels. I was reading Gibbs' column while sitting in front of a roaring fire in the wood stove in my work shed when it struck me.

I've lost very little. I have more free time, because there are quite a few hours in each day where there is nothing on TV that I can bear to watch. I've lost the ability to quickly send or receive large digital photos online.

At the same time I've learned a few things. Sitting in front of a warm fire with good music on the radio beats watching most reality shows. Many of my friends and relatives have no idea how to resize a photo for e-mailing. And, maybe most importantly, many of the things I considered to be necessities a year ago are, at best, distractions.

The only thing I can honestly say that I've lost by becoming less digital is about 10 pounds.

Cory Jaeger
Co-owner
CAS Technologies
Biramwood, Wis.

I agree with most of Mark Gibbs' column. However, I do think that there is a digital lifestyle in the making, and it's more along the lines of Steve Jobs' vision than that of Bill Gates. The impending digital lifestyle that I see revolves around simpler, well-established technologies — digital photography, videos, PC-based editing tools, Wi-Fi, USB and online sharing services such as Flickr. I use my non-technical friends as bellwethers of how far these technologies

have penetrated and how simple they are to use. My experience is that even non-technical users are increasingly comfortable with ubiquitous digital media and communications: setting up a Wi-Fi network, using digital cameras and camcorders, and moving files to their computers and sharing them online.

Digital photography has largely supplanted paper, digital video via the Internet will soon raise the profile of the iPod and media PC as the video source, and very high-resolution readers will cut into the use of paper. It may not be as sexy a vision as Microsoft and the phone companies present, but it's based on solid technologies that can be easily deployed and will comprise Digital Lifestyle 1.0.

Bob Matsuoka
President
RunTime Technologies
New York

Meanwhile, back in the real world, who is taking care of our sewage and water systems, electrical grids and real-life infrastructure? It appears to me that we have a generation that knows little to nothing about these things. Is the digital world resulting in us losing the know-how of our forefathers? Parents, here's a suggestion: Take your kid(s) through your basement and explain the basics of how the house works. If you don't know a water line from a gas line from a sewage line, then find out. Then, maybe someone will be stimulated enough to say, "Hey, I think there's a way to make this better." Who knows, maybe this digital stuff can be put to some good use after that.

Jim Bandinelli
Buffalo, N.Y.

E-mail letters to jdix@nww.com or send them to John Dix, editor in chief, Network World, 118 Turnpike Road, Southborough, MA 01772. Please include phone number and address for verification.

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TOTALLY UNPLUGGED

Ira Brodsky

802.11n reaches the starting line

Last year a group of companies attempted an end run around the IEEE committee developing the next-generation wireless LAN standard, 802.11n. Its goal was to obtain a time-to-market advantage over the one firm that has successfully commercialized the advanced technology central to 802.11n. The industry rebuffed this maneuver.

A quick review of 802.11n is in order. The 802.11n Task Group was established to identify a WLAN technology capable of delivering throughputs well above 100Mbps for such advanced applications as multimedia networking. Virtually everyone agreed that the best choice was multiple input/multiple output (MIMO) orthogonal frequency division multiplexing (OFDM), which also delivers significantly greater range and capacity.

Led by chip makers Atheros, Broadcom, Intel and Marvell, the Enhanced Wireless Consortium (EWC) was announced last October and claimed as one of its primary objectives "to accelerate the IEEE 802.11n standard-development process."

But that claim is belied by the facts. Two competing factions came to dominate the 802.11n Task Group after it was founded in January 2004: TGn Sync and World-Wide Spectrum Efficiency (WWiSE). In May, the TGn Sync group tried but

failed to get the 75% majority of votes needed to pass its proposed specification. By July, TGn Sync and WWiSE announced they would work together in a joint proposal group to produce a merged specification. At a meeting in September, the group reported progress and said it was reasonable to expect a complete proposal by November. In October the EWC came forward, ostensibly to help move things along, yet by the close of the

The only way to create a standard to which everyone will adhere is to ensure the process is open and fair.

November meeting there was still no proposal.

It seems reasonable to conclude that the EWC hoped to push through the draft specification it developed in private to give its four founding chip maker members a head start in developing standards-based silicon vis-à-vis Airgo Networks, a firm that has already delivered three generations of MIMO-OFDM chipsets.

But they overlooked one important detail. Other vendors are very interested in the development of an 802.11n standard that will help the market

grow and believe this can be accomplished only through a fair and open process. Dell, Motorola, Nokia, Samsung and Texas Instruments were among the companies determined to see important market needs addressed in the specification.

Thus, the EWC was forced to return to the 802.11n joint proposal group and negotiate a compromise. As things stand, the EWC proposal has undergone 24 media access-control layer revisions and 27 physical layer revisions.

To its credit, the Wi-Fi Alliance steadfastly has defended the open standards process, but some chip makers now claim their products are 802.11n-upgradeable, though the standard isn't complete and interoperability tests are probably a year away. The maneuvering continues.

Standards are crucial to telecom market growth. But we should have no illusions about the standards-setting process. Vendors will always try to manipulate the system for their own advantage. The only way to create a standard to which everyone will adhere is to ensure the process is open and fair.

Brodsky is president of Datacomm Research of St. Louis. He can be reached at ibrodsky@datacommresearch.com.



INDUSTRY COMMENTARY

Frank Dzubeck

How smart should a network be?

For the past 40 years, networking within the corporate world has evolved in sync with IT. This may or may not change in 2006, depending on whether you believe the vision of Cisco or the IT industry. Computing concepts in the IT industry have evolved over the past four decades from centralized to distributed to client/server to network-based to peer-to-peer to service-oriented.

Within a service-oriented architecture (SOA), the infrastructure building blocks of computing, storage and networking form the foundation. Cisco has challenged this concept by creating its own vision, called a Service Oriented Network Architecture (SONA), in which the network is the foundation for all IT, acting as the glue that holds together every aspect of IT infrastructure — clients, servers and storage.

This is not just an arcane philosophical issue; it is fundamental to how to design, implement, operate and manage a corporate SOA. Based on industry standards, an SOA is a multilayer framework that allows all computing concepts to exist in a single architecture with a single mission: technological implementation of the corporation's business processes. To accomplish this mission, application-to-application intelligence will be distributed throughout the entire business-process chain, including the corporation, customers, suppliers, and sales and distribution channels. In this architecture, the corporate network becomes the physical "nervous system" that links all third parties with corporate IT, and the enterprise service bus (ESB) becomes the logical electrical signaling for communications.

SONA is fundamentally different; it creates a three-layer framework by sandwiching the concept of an interactive services layer between software and networked infrastructure. The architecture concentrates communications intelligence in the network and assumes passive IT software and infrastructure environments.

To complicate the issue, a Cisco service is not an SOA service. An SOA service is defined as reusable software components with well-defined, published, standards-compliant interfaces that perform a specific function on behalf of a computing entity, such as a user or another software

SONA will . . . complicate and inhibit an optimized SOA deployment.

component. A SONA service has higher granularity from a software perspective, may or may not be reusable, has no published APIs, is vendor-specific, and performs an interactive communication function between applications and infrastructure.

Last month, two new SOA initiatives were put in place that will allow application virtualization to occur across a network: Service Component Architecture (SCA), created as a model for constructing and assembling networks of services; and Service Data Objects (SDO), created to define a common access methodology to data. SCA and SDO are multivendor IT industry initiatives that have no Cisco representation and will create further differentiation between SOA and SONA.

At first glance SOAs and SONA can coexist; one is applicable to software, and the other to networking. Unfortunately, SONA will, in all probability, complicate and inhibit an optimized SOA deployment. If Cisco is intent on moving functions that formerly resided in software into the network and performing compute/server virtualization and management in SONA, then any corporate benefits derived from the implementation of a dual SOA/SONA may be limited.

From a corporate IT perspective, SONA produces more questions than answers. What modeling and development tools exist to blend SOA and SONA services into the business process? How does a corporate business application request a SONA service if it is not an SOA service? How can end-to-end virtualization or workflow-performance optimization occur in a multivendor SOA/SONA environment? Will SONA be compliant with future SCA and SDO industry standards — and what are the industry standards applicable to SONA? Will SONA have a network service bus similar to an SOA's ESB? An SOA can be deployed using both insourced and outsourced infrastructure; can SONA be deployed in a similar manner?

The questions go on and on. But one final IT/networking industry and corporate IT question needs an answer: Is SONA a creation of hubris or bad "marketecture"?

Dzubeck is president of Communications Network Architects, an industry analysis firm in Washington, D.C. He can be reached at fdzubeck@commnetarch.com.

GUIDE TO: WIRELESS/MOBILITY

■ **Device envy** New enterprise-class 3G devices will become available this year. **Page 43.**
■ **Appetite for apps** New location-based services will be built on 3G networks. **Page 44.**

Make way for 3G

New cellular networks offer mobile workers ubiquitous access to enterprise applications.

BY MARK LOWENSTEIN

2006 IS SHAPING UP AS THE YEAR WHEN DATA-optimized cellular wireless networks could become the preferred method for IT executives to provide remote access to their mobile workforces.

The three leading cellular wireless operators — Cingular, Sprint Nextel and Verizon — are all in the process of deploying 3G networks, which offer average throughput rates of 400K to 700Kbps. This major network upgrade is being accompanied by an expanding array of business-class devices designed to take advantage of 3G. For example, we are seeing the first 3G BlackBerry, a 3G Treo running Windows, and several exciting new enterprise-centric devices from Nokia featuring Symbian OS and BlackBerry Connect for wireless e-mail. In addition, Microsoft will play a greater role in helping enterprises go mobile. Several new PDAs are planned, most with WAN and Wi-Fi built in; and Windows Mobile 5.0 and Service

Pack 2 will provide for push e-mail capabilities and better synchronization with Exchange, finally making Microsoft a viable contender for mobile e-mail. Two other developments also could take enterprise mobile to the next level. The first is fixed-mobile convergence. You can expect to see the first mainstream mobile devices that feature both WAN and Wi-Fi chipsets, which will allow for even higher-speed data in certain locations, plus the potential to leverage the broadband network for voice to address in-building coverage issues and reduce cellular bills. Second, expect to see wireless operators make location-based services a broader part of their product offerings. That said, the picture is not totally rosy. IT executives should know that, while compelling, cellular technology involves compromises. Coverage is not perfect. It is difficult to choose a one-size-fits-all device. The first converged WAN/Wi-Fi devices will involve trade-offs in areas such as form factor and battery life. Finally, because wireless networks remain expensive to deploy and support, services still command a premium. For example, 3G must have the ROI to support the cost: a minimum of \$60 per month for PC card access. Some customers might have to choose between wireless e-mail and 3G remote access, because they will not be prepared to spend between \$100 and \$120 per month, per worker for wireless data in addition to voice.

The WAN: Undergoing an upgrade

The three leading wireless carriers are all in the process of rolling out 3G networks. For Sprint Nextel and Verizon, 3G involves an upgrade from the Code Division Multiple Access 1x (CDMA) network for data to 1x Evolution Data Optimized (EV-DO). For Cingular, which supports GSM technology, it means evolving from Enhanced Data rates for GSM Evolution (EDGE) to High Speed Download Packet Access (HSDPA). From a company perspective, there are four key questions related to 3G:

What does 3G mean for my mobile workforce?

Previous generations of wireless data networks were suitable for wireless e-mail and customized products that helped optimize applications for throughput-challenged wireless networks. All that changes with 3G. Throughput rates for 3G average 400K to 700Kbps, which means for the first time the WAN is a viable contender for remote access. With a PC card and a VPN client, mobile workers can access their corporate applications wherever there is cellular coverage. Where 3G is not yet available, the service is backward-compatible to 2.5G (EDGE for Cingular, and 1x for Verizon and Sprint). I have been using a data-only card from Verizon Wireless for about a year. The bottom line is even though it's not as good as broadband in the office or Wi-Fi, it's good enough most of the time. The data-only service has displaced somewhere between 50% and 75% of my traditional remote broadband connections (such as Wi-Fi hot spots or hotel room service). At \$60 per month for unlimited service, the ROI on a \$7-to-\$12-per-day broadband connection becomes quite evi-

dent. There's also the convenience factor of the same sign-on and authentication procedure no matter where you are. Is 3G ideal? By no means. Coverage still varies by operator and location, but will improve markedly in 2006. And the high throughput rates pertain mainly to the downlink, whereas the speeds are limited to 80K to 140Kbps on the uplink. This means higher-than-desired latencies, and problems in sending or uploading large files. Are there differences between carrier 3G offerings? You will see a lot of marketing in 2006, as each operator touts its version of 3G. Here are the main differences: • **Coverage.** At this early stage, there are substantial differences by operator and by market, so you should evaluate carefully. Verizon has the clear lead, Sprint Nextel is catching up quickly and Cingular has aggressive plans to cover 50% to 75% of its footprint by year-end. By mid-2007, we will be closer to parity, and the greatest differences will be outside major metropolitan areas. Also note that as of now, Cingular's 3G service is only available on PC cards, not phones. • **Network performance.** Promised throughput rates are

Current 3G network capabilities

Network	Data speed	Operator status
GPRS	30K-60Kbps	• Near-complete GSM network coverage.
EDGE	75K-150Kbps	• Cingular: Across most of network. • T-Mobile: Has upgraded.
UMTS HSDPA	400K-700Kbps	• Cingular: 16 cities. • T-Mobile: Upgrade unlikely before 2007.
CDMA 1x	30K-70Kbps	• Deployed across North America CDMA networks.
CDMA 1x EV-DO	400K-700Kbps	• Verizon: 75 markets, 70% of POPs. • Sprint Nextel: 50 markets, 50% of POPs.

all in the same range, although HSDPA is newer and less proven. We don't know what happens yet when these networks get truly loaded. Latency is another consideration, with HSDPA having a slight advantage. Finally, voice and data sessions can be run simultaneously on HSDPA but not on EV-DO. This is not an issue with respect to laptop usage, but it could be a differentiator for PDAs and 3G phones, depending on your use case. If you are thinking about using VoIP over 3G, I would not recommend it at this time. The QoS is not adequate for mobile VoIP, and carriers will not support it. Upgrades to the 3G network planned for 2007 will make VoIP possible — if the carriers allow it. At this time, the norm seems to be \$60 per month for unlimited use, plus \$100 or so for a PC card. After that, there are some subtle differences by operator. All this is negotiable if you're considering more than 25 lines. Some operators offer a discount on PC card access if you already have BlackBerry service, or they will allow you to use a 3G-enabled phone or PDA as a modem. • **Devices.** There aren't significant differences among PC cards, but there are among the connection clients that come with the cards, mainly in the areas of ease of

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use, Wi-Fi capability, and authentication and security features. Also, some of the first 3G-equipped PDAs are just now becoming available. Cingular should launch its first HSDPA-capable handset this quarter.

What kinds of decisions must I make?

This is a year when operators will be encouraging you to upgrade to 3G. Here are the key questions you should ask:

- Is the coverage adequate for the patterns of my mobile workers?
- Am I interested in PC-card remote access or a 3G-equipped PDA?
- Is this a new implementation, incremental to mobile e-mail, or a replacement? How does it fit with my broader remote access strategy?
- Do I want a data-only service or device, or something that includes both data and voice?

What about Wi-Fi and WiMAX?

Wi-Fi hot spots continue to spread, but IT executives know

by now that the public 802.11 infrastructure remains a fragmented hodgepodge. Municipal Wi-Fi provides broader coverage but is suitable only for those who travel in a limited area. The current WiMAX standard does not allow for mobility. Corporate offerings are in a very limited number of markets today and are primarily focused on a wireless replacement for a broadband connection at a fixed location. Mobile WiMAX, or 802.16e, is part of the broader discussion about a 4G wireless network that could have an impact later this decade. The WAN is not standing still also. We should see upgrades to current 3G networks over the next 12 to 18 months. For example, EV-DO Rev A promises:

- Faster uplink speeds and a more symmetrical network architecture.
- Reduced latencies.
- The possibility for VoIP over the WAN.

The bottom line is that the 3G WAN currently offered is the best we're going to have, on a broad geographic basis, for the next three years. However, if the only thing you need is e-mail access from a PDA device, you don't need 3G.

International: Still an Achilles' heel

For companies whose workers travel internationally, wireless voice and data access remains an expensive hodgepodge. If your international requirements are frequent and ongoing, your best options remain the GSM carriers — Cingular and T-Mobile. Most of their devices work anywhere there is GSM coverage, which is the majority of countries. The main drawback is that GSM service is expensive, averaging \$1.49 per minute, often more. Additionally, some features, such as voice mail and Short Message Service, might not be available all the time.

If you are a Sprint or Verizon customer, your options are more limited because CDMA is not as common outside North America. Each carrier offers a couple of dual-mode devices that switch over to GSM when the subscriber travels abroad. There are also myriad rental programs that attempt to provide some level of number and billing seamlessness for traveling subscribers.

What's changing in 2006? Options for international travelers are improving modestly:

- **Dual-mode devices for the enterprise.** A couple of CDMA-based enterprise devices, likely containing the Windows Mobile operating system, will include GSM capability. The first such device is the recently launched Samsung i830.

- **Improved data access.** This is a major focus for Cingular's HSDPA launch. All HSDPA devices will be quad-band, meaning they will work globally wherever there is GSM coverage. This will include GPRS, EDGE or UMTS data access, depending on the country and the agreement with the operator. The data access will also include PC cards.

- **Some price relief.** Cingular recently announced an international roaming package for \$5.99 per month, which provides for discounts of an average 30%. It's better but still not a bargain.

Probably the best deal for enterprise users is the \$69 BlackBerry plan that includes unlimited international use.

- **Wireless LAN roaming.** Operators — notably Sprint and T-Mobile — are expanding the number of agreements with international Wi-Fi hot spot aggregators. Sprint, for example, has access to more than 25,000 hot spots, many of them international. This can be a very good option for data, especially in major cities.

Users can also start considering alternative options for wireless. For example, to get around prohibitive international roaming fees, some users are downloading a VoIP client onto a Wi-Fi-equipped PDA. VoIP-based options will expand over the next couple of years, unless operators outside the United States reduce their roaming fees.

The devices: Optimized for 3G

This year we will see an expanded array of PC cards and enterprise-class devices, all leveraging new 3G networks. New capabilities of interest to enterprise users are shown in the graphic on page 44.

PC cards

As 3G networks spread, we will see a major emphasis on remote access products. You should be able to get a 3G PC card for \$99 or less. Is there a real difference among the brands? There are minor variations in data performance, but the area to focus on is the connection client on the PC, because there are differences in functionality, such as:

- **Compression.** Some connection clients include built-in compression.

- **Wi-Fi functionality.** Some PC cards combine WAN and wireless LAN (WLAN) functions, or are at least able to detect WAN signal strength and WLAN access points.

- **Session and service control.** These features include support for roaming, VPN tunnel support, an authentication procedure and session management.

We will also start seeing a broader range of PCs that have embedded WAN modems. The advantage of this option is that greater thought has been given to the integration of WAN services on PCs, and the performance on the integrated cards is a little better. The drawback is that you have to make a commitment to a particular operator, rather than having the option of swapping PC cards. In an era of uneven 3G coverage, this is a risk.

Enterprise-class devices

Enterprise decision makers can expect to see the following developments in the platform and high-end

device segments in 2006:

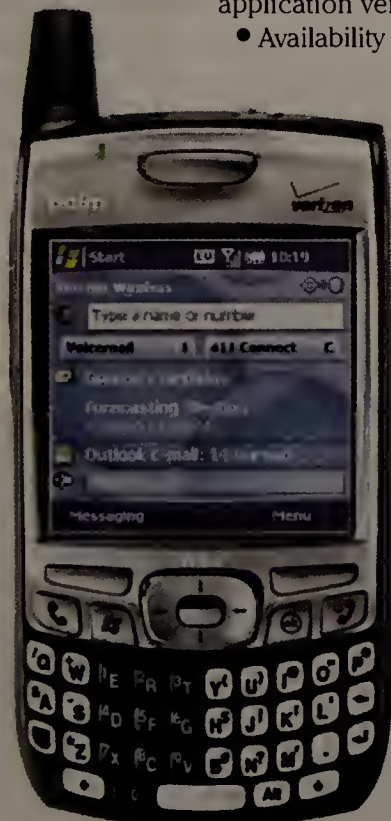
Research in Motion. Keep a close eye on the patent dispute between RIM and NTP. It is unlikely that BlackBerry will get shut down, but there will probably be a fairly substantial settlement. You might consider holding off on a major purchase until the issue is resolved, likely early this year. We have been impressed with the pace of new product introductions from RIM, despite the patent distractions. Keep an eye out for:

- The first 3G BlackBerry, now available from Verizon Wireless.
- 3G BlackBerry devices for Cingular, likely in the first half of this year.
- More extensive support of enterprise applications, beyond e-mail, and deeper partnerships with enterprise application vendors.
- Availability of BlackBerry Connect software on a larger number of devices.

Palm. The major news from Palm will be the Treo 700w, available now from Verizon Wireless. The Treo 700w, Palm's first 3G device, uses Microsoft's Windows Mobile 5.0 operating system. Expect additional 3G models from other carriers to be released throughout the year.

Nokia. Nokia is making a more aggressive foray into the enterprise. During 2005, the company launched Nokia Business Center, and it also recently acquired Intellisync. It also is coming out with a new suite of enterprise-centric phones, which it calls the E Series. The E61, which looks like a cross between a Treo and a BlackBerry, is scheduled to be available early this year; it is the most serious of all the enterprise-class devices. It supports:

- Multiple enterprise e-mail options, such as GoodLink, Visto,



Palm's 3G-enabled Treo 700w features the Windows Mobile OS.

Seven and BlackBerry Connect.

- Wi-Fi capability.
- IP integration, with features designed to better integrate with company PBX systems.

Another Nokia enterprise-centric device is the 9300. Although not yet 3G-enabled, it features Wi-Fi, a qwerty keyboard and support for many enterprise applications.

Motorola. Another device that companies should keep an eye on is the Motorola Q phone, also known as the RazorBerry. It's as thin as the popular Razr, but features a large display and qwerty keyboard. It will be one of the first devices to feature Windows Mobile 5.0 and possibly to support BlackBerry Connect.

Microsoft. This year there will be a significant number of new Windows Mobile-enabled wireless devices from Microsoft and other companies. Additionally, Service Pack 2 for mobile will become available, which should make Microsoft-based devices more competitive with BlackBerry for mobile e-mail. All these products are intended to improve Microsoft Exchange integration for mobile users.



Motorola's Q phone, also known as the RazorBerry, has the thinness of the RAZR with a large display and qwerty keyboard.

The apps: Available anywhere

The expanded capabilities of wireless networks and devices will open new avenues for applications. With 3G networks, we will see greater emphasis on laptop remote access into corporate applications. In this way, middleware for anything other than custom applications will start to become less relevant in the enterprise.

In addition to important developments in network and device capabilities, IT executives should keep their eye on the following hot topics that should expand the applications framework in 2006.

Location-based services. LBS will be an area for value-added corporate applications this year. More than 50% of all phones being sold to companies have GPS chips, and accuracy levels continue to improve. Carriers such as Nextel have built an extensive partner network to deliver location-enabled applications that are delivering ROI daily in the enterprise market. We are increasingly seeing integrated products that combine LBS with in-office software to link assignment, dispatch, notification and tracking.

Enterprises should think about LBS in two ways: as a unique capability for specific vertical segments, such as fleets and transportation; and as a value-added capability within existing applications. Sprint, for example, has partnered with IBM and Microsoft to deliver a Web services capability for location, where APIs are included in the application framework.

Packaged applications. One key question is, beyond e-mail and personal information manager applications, which mobile application will be next to scale in the enterprise? In 2006 there will be a number of packaged applications in the areas of salesforce and field-force automation,

offered directly by the wireless operators. One driving force is the reduced need to optimize certain functions for mobile using expensive and complex middleware, because of significantly improved wireless network and device capabilities. Additionally, small and midsize businesses are looking for plug-and-play software for certain functions, and believe that applications such as salesforce automation can be implemented without a great deal of customization.

Device management. Device management is becoming the new front in mobile security. As high-end devices proliferate, sensitive corporate information can get into the wrong hands if a phone is lost or stolen. More-advanced devices are also increasingly vulnerable to spam and viruses. There are millions of enterprise workers carrying around high-end mobile devices containing sensitive corporate information, and enterprises historically have not done a good job of tracking these devices as assets.

There is a rapidly expanding array of products for device management. A sound framework for mobile device management includes both policies, such as extending WLAN policies to the WAN, and technology — everything from firewalls; VPNs; anti-spam, anti-spyware and anti-virus programs; intrusion detection; mobile-asset tracking; device lockdown; and so on.

New business models. Enterprise decision makers might consider managed services as an approach for certain elements of their mobile-solution sets. Device management provides a good case in point. The good news is that there is a broad range of device management products available today. The bad news is that the product ecosystem is disparate and fragmented. As a result, many IT executives are not dealing with the device management problem directly and effectively. Managed services is an approach that is gaining popularity. For example, the lead product in Sprint's Managed Mobility Services program addresses device management.

Enterprises might find some value-added resellers offer a hosted approach to mobile. For example, Integrated Mobile offers companies a series of hosted capabilities, such as device provisioning, asset tracking, customized billing, and applications such as messaging for a monthly fee.

Convergence. Although a compelling converged WAN/Wi-Fi voice device for the enterprise is still about a year away, one area IT executives should keep their eyes on is improved integration with enterprise IP PBXs. As enterprises install more IP-centric equipment in their offices, it is easier to design certain elements of unified communications services. Examples include:

- Making cell phone numbers four-digit extensions of the company PBX.
- Improving access to corporate directories.
- Integrating voice mail boxes.
- Integrating voice mail into mobile e-mail services, so voice messages appear in e-mail in-boxes as .WAV files (which can then be easily forwarded, answered and so on).

We're still in the early days of the long-term integration of the wired and wireless worlds, as we move, measuredly, to an IP Multimedia Subsystem (IMS) framework and Session Initiation Protocol-enabled fixed and mobile devices. IMS is starting to be a major buzzword in the telecom world. Don't get caught up in the hype, however. This is the beginning of a five- to seven-year network evolution. From an applications perspective, you will see some new features and capabilities based on the IMS architecture beginning in 2007. IMS is

Key device developments in 2006

Area	Details
Imaging	Mega-pixel cameras, exceeding 2 mega-pixels in some models.
	Some corporate-centric image messaging applications.
	Audio and video codecs in more than 30% of higher-end devices.
International	Most 3G phones from Gingular will be quad-band.
	The Samsung i830 adds GSM support for world roaming for Verizon subscribers, but swaps out the Wi-Fi card.
Memory/Storage	40 MHz processors in higher-end devices.
	64MB of memory will be the minimum for enterprise-class devices, moving to 128MB or even 256MB for feature phones and multimedia-centric devices.
	50% will have some sort of removable storage, such as a mini SD card slot.
Enterprise IP devices	Greater integration with enterprise IP equipment, such as IP PBXs, and enterprise voice features, such as elements of unified communications.
E-mail integration	Support for Service Pack 2 for Windows Mobile 5.0 devices, which will deliver a more BlackBerry-like experience, such as push e-mail.
Bluetooth	Most high-end handsets and OS phones are coming with Bluetooth support standard, which should be a default feature for mobile employees. More phones will support Bluetooth 2.0.
	Improved Bluetooth integration with certain devices such as printers and PCs for synchronization.
	More plug-and-play integration with vehicles, which is key for mobile workers who spend a lot of time driving.
Wi-Fi support	Wi-Fi capability is becoming standard on most PDA devices.
	Some of the first phones with support for Wi-Fi will be the Samsung T709 and the Motorola A910.
Security	VPN clients on more phone models.
	Higher-end devices will feature device lock and data wipe.
	Data encryption and anti-virus software will be options on some devices.
	Improved digital rights management for content protection and device security.

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not something you should be taking into account from an IT planning perspective for at least a year.

Conclusion: Push vendors harder

Two final observations on how the enterprise mobile market has developed: First, enterprises have tended to expect their wireless operators to reach way beyond

their core competencies to meet enterprise application requirements. In essence, wireless operators have had to become mini systems integrators.

Second, operators are being assisted by a large number of relatively small middleware and industry-specific software providers.

What's missing is the larger packaged application providers — SAP, Oracle and others — have underemphasized mobility in their product development efforts or have missed the mark in what they have done. The larger systems integrators for the most part also have not established

centers of excellence in mobile. These two entities, which are already firmly entrenched in enterprise applications, infrastructure and legacy systems, must step up and launch a more focused, concrete initiative in the enterprise.

As wireless starts to become in-

tegral to a company's broader IT strategy, enterprise decision makers should continue to ask more of their technology providers.

Lowenstein is managing director of Mobile Ecosystem in Wellesley, Mass. He can be reached at mlowenstein@m-ecosystem.com.

Ten tips

Here's a 10-point framework to assist corporate decision makers in developing their mobile policies.

- Develop classification criteria for different types of mobile workers and their unique network, device, application and support requirements.
- Determine the devices and services you will pay for, based on employee level, function and mobility patterns.
- Establish how ROI will be measured.
- Distinguish between broad, horizontal requirements and specific vertical needs.
- Develop a methodology for effectively communicating your expectations to service providers and vendors based on their specialties, as well as criteria for measuring and benchmarking them.
- Consider security requirements at the access and device level. Mobile security should be integrated more effectively into the broader enterprise security framework.
- Determine how personal use of mobile devices and services will be handled.
- Develop rules for customer access to the mobile framework.
- Establish policies and a structure for help desk support of mobile employees, and determine whether this is handled internally or outsourced.
- Develop mobile policies as part of broader IT framework and vendor and partner relationships.

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CLEAR CHOICE TEST

OptiVault reduces the need for magnetic tape backup

BY JOEL SNYDER, NETWORK WORLD LAB ALLIANCE

Primera Technology's OptiVault aims to help IT managers solve the problems of long-term e-mail and critical file backups by replacing traditional tapes with DVD media.

We tested the OptiVault by backing up our Windows-based Microsoft Exchange server and found that the OptiVault performs exactly as advertised. Because the OptiVault is primarily a backup server, it may not meet all regulatory requirements for e-mail archiving. Rather, the system would be a good starting point for small and midsize businesses or enterprise workgroups that need to create and manage backups of a moderate amount of data.

The OptiVault is a clever package of four components, designed to simplify managing archival backups. At the center is a DVD burner, surrounded by Primera's robotics and a color inkjet direct-to-disc printer. These three pieces are controlled by the EMC/Dantz Retrospect backup application. All four components are included in the \$3,800 base package.

We attached the OptiVault to our Windows 2000 server running Microsoft Exchange. Our model was a tabletop version, but Primera makes an optional rack-mount adapter for \$100 that lets you put it into a standard 19-inch rack. This was the first device in years to come through the lab without an Ethernet port, but the system's USB 2.0 connection had sufficient performance to speed backups, and it simplified installation. Primera bundles all the drivers and software on a single CD-ROM.

Our installation initially failed in one of those cryptic Windows "everything is fine but nothing works" kind of ways. We rebooted, forced Windows to update drivers and magically it all started working. In addition to the Retrospect backup software, the installation CD includes software to control the robotics and manage the printer.

We loaded 25 DVD-ROM discs into the OptiVault and

used Retrospect to set up our backup strategy. Existing users of the venerable Retrospect won't find anything different when backing up with this device compared with tape libraries or other media. New Retrospect users will find that it behaves much like Windows-based backup systems. We defined the volumes we wanted backed up, set a schedule and that was about it. The robotics in the OptiVault shuffled discs, the internal printer created attractive labels and in about 98 minutes we had four nicely printed DVDs that backed up the 16GB stored on our main file server. Future backups during the one-month test were faster and didn't require additional media, because Retrospect backs up only changed files. The speed we saw in our tests, about 10GB per hour, includes Retrospect's optional but highly recommended "compare" to check backup readability.

The Primera/Retrospect bundle includes an Exchange-specific license that lets the system back up at the mailbox level. This means you don't have to back up your entire Exchange mailbox file as a single, monolithic chunk. Instead, you can back up and restore individual mailboxes with the Exchange message store. We created a second media set to hold our Exchange users; again, Retrospect and the OptiVault performed beautifully.

Robots at work

To verify that the discs were properly created, we tried several restores of both normal files and an Exchange mailbox. Backups were uneventful, but the restores were fun to watch, as the OptiVault shuffled discs between its two bins, looking for the right one to put into the DVD drive. Primera makes the OptiVault look eerily cool by lighting the inside with two super-bright arrays of blue LEDs. The system glows constantly, like some high-tech cross between a Picasso painting and a Rube Goldberg contraption.

The system behaved perfectly in our restore test, restoring files to our file server and Exchange mailbox without any errors or problems. Although it took a while to shuffle DVDs back and forth, the OptiVault worked much faster to restore data than a tape drive does.

Once all 25 DVDs in the OptiVault are full, operations are not as simple as dropping another pile of 25 discs in — though they could be. Left to its own devices, Retrospect would keep adding on to the backup sets we defined, which means you would need to keep dozens, or even hundreds, of DVDs to be sure you could restore a particular file.

BACKUP APPLIANCE

OPTIVault

Primera Technology www.primera.com

NetResults 4.25

\$3,795 (includes Retrospect and Exchange licenses).

Pros: Excellent integration between Retrospect backup, DVD burner, robotics and printer; very low maintenance with 25-DVD capacity.

Cons: Needs additional software to be a true archiving device.

The Breakdown

Features	40%	4	Scoring Key: 5: Exceptional. 4: Very good. 3: Average. 2: Below average. 1: Subpar or not available.
Ease of use	30%	5	
Performance	20%	4	
Installation/documentation	10%	3.5	
Total score		4.25	

But with a small amount of scripting, we could tell Retrospect to start a new backup set each week. The new set caused Retrospect to start over with a full save, adding incrementals daily until the end of the week. Once we fine-tuned our scripts, keeping the omniscient blue-glowing OptiVault happy was a matter of feeding it DVDs as it used them up. It took us about three hours to go from nothing to an automated backup strategy that needed little maintenance other than new DVDs once a month. (Primera strongly recommends you use its media for archival-quality backups, which it sells for about \$1.25 each.)

The device uses normal single-sided DVDs that hold about 4.7GB of data (it can hold more if your data is compressible). The data you can comfortably back up in an OptiVault is limited to between 50GB and 100GB. If you have more than that, the speed, density and storage issues of DVDs would make tape a better solution. However, because the OptiVault integrates cleanly with Retrospect, you could use DVDs for some files and tapes for others, even if you had a larger data store.

Even though Primera advertises the OptiVault as an archiving tool for e-mail compliance, it may not be the right answer for everyone. Because OptiVault works with Retrospect, it can make backups from message stores as they exist at the moment of backup, but it isn't guaranteed to catch every single message (for example, those created and deleted between backups). The software's design as a backup tool also doesn't help when it comes to searching large time spans for messages. You would have to restore each mailbox from each backup set over time, because the backups form a snapshot of the message store, not a continuous archive of messages.

Still, we found the one-two punch of OptiVault and Retrospect to be a solid answer to the problem of creating and managing backups of moderate amounts of data. Priced competitively with magnetic tape products, the OptiVault offers the advantage of DVD Write Once/Read Mostly media in a highly automated package — and it glows blue.

Snyder is senior partner at Opus One in Tucson, Ariz., a consulting firm specializing in network security and e-mail applications. He can be reached at Joel.Snyder@Opus1.com.



The blue glow of the OptiVault appliance may make backup more interesting to watch.

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Boomerang employees are back

As demand for IT skills ramps up, consider former employees as your next new hires.

BY DENISE DUBIE

If you are among the fortunate IT departments anticipating adding staff in 2006, industry watchers advise you to look close to home when recruiting.

Rehiring previous employees is a trend that's going to be in full swing in 2006, considering that more than half of 100 U.S. organizations polled in 2005 by Right Management Associates said they would hire a former staff member. That number is expected to grow this year, as IT departments' demand for specific skill sets and technology experience ramps up.

"We have noticed an increased appreciation for the boomerang or rebound employee in the past year or so. Companies believe the previous experience with and knowing the employee reduces the risk of a bad hire," says Joyce Gioia, president at The Herman Group, a consulting and research firm that specializes in workforce issues. If an alumni organization or outreach program for valued former employees doesn't already exist, your company should establish one, Gioia says. That way, former employees are aware of open positions, and all the information needed to rehire staff quickly is readily available.

David Rahbany, an employee of Celestial Seasonings in Boulder, Colo., says his return to the company had more to do with luck than any formal outreach program. He left the organization in 2000 following its acquisition by The Hain Food Group (now The Hain Celestial Group) because he feared the corporate culture he was accustomed to would change. He also wanted to take advantage of the then-IT boom while he had the chance.

"I was eager to pursue other IT-related fields before the bubble burst. Couple that with my concerns over the culture after we were acquired, and it just made sense to move on," Rahbany says.

But he didn't stay away long. About a year later, unsatisfied with the culture at his new company, Rahbany ran into his former employer, Mo Siegel, founder of Celestial Seasonings, at a hardware store. He told Siegel he wished he had never

left and was happy to hear Siegel was willing to check for new opportunities within the company.

When Rahbany left, he was the systems administrator; he returned as an IT analyst. He says his role changed from managing computers and servers to focusing more on integration projects for the company as a whole. For example, when the company acquired other companies, he says, "I would integrate their networks into ours as well as their sales data into [our] centralized reporting systems." Although his responsibilities had grown and he was more challenged, he also was back with a familiar group of co-workers.

"It was a nice relief to get back with some of the people I had worked with and to return to the corporate culture I liked. It hadn't changed," Rahbany says.

He advises IT workers to consider carefully why they want to leave an employer before they make the leap. If they can increase their value in terms of IT skills and experience at a new company, it could be a good reason to leave and to keep their old company in mind for future job changes.

"The truth is if I didn't leave the first time, I wouldn't have had the opportunity to come back, because at the time my current position didn't exist and I didn't have the experience to do it," he says. "But I did learn that the problems that are typical in any organization will follow you wherever you go."

Bringing back employees appears to be company policy at Celestial Seasonings. According to Stephanie Thibault, benefits manager in the company's HR department — and a boomerang employee herself — 27 staffers, or about 11% of the nearly 250 employees, are boomerang hires.

"The company benefits because employees have more appreciation for their company when they choose to come back,"

she says. "They are also more well-rounded and are easier to integrate into our systems and operations."

Carl Youngren's case is a bit different. He retired as a systems programmer in the information systems division at the state of California's Health and Human Services Data Center in Sacramento, but says at age 60, he soon realized it wasn't the lifestyle for him. Youngren's employer took him back on a part-time, salary-only basis (he doesn't work enough hours to get full benefits) because Youngren's mainframe skills are hard to replace in today's pool of job candidates.

"I have the technical and institutional knowledge that the organization needs right now," he says. "I have more people in the training pipeline so they don't find themselves at a loss for these skills in the future."

As a rebound retiree, Youngren says, he has the best of both worlds. "I can keep my technical knowledge up-to-date and focus on those areas of expertise, and still work part time," he says. "It's hard for us tech types to quit jobs cold turkey."

According to Right Management, an organization benefits in numerous ways when a former employee returns. For one, a former employee is more likely — and more quickly — to adapt positively. Such employees are familiar with the company and with how things work, and they know what is expected of them.

"Companies have become more aware of the potential costs of bad hiring decisions, including having to readvertise for and recruit candidates, paying fees to recruiters, losing business income, decreased productivity and potential, and wrongful-termination suits," says Brian Clapp, a vice president with Right Management, in a statement.

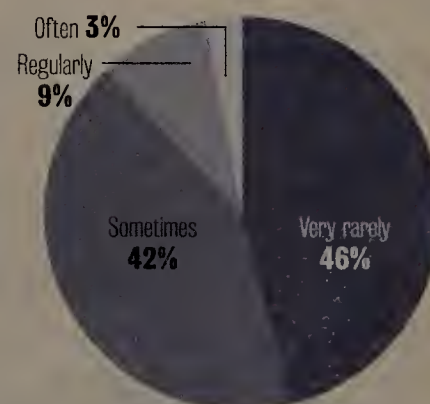
Whether an employee departed as the result of a layoff or decided to explore an opportunity at a different company, IT hiring managers should keep an open mind when they're filling vacant slots in their shops. "Companies should never really let valued employees fall out of touch or hold their leaving the company against them; if they left on good terms, they will most likely return more valuable than when they left," The Herman

Group's Gioia says. The time spent at another company could in some cases be considered training in new skills. "Many employees leave to get experience in a new area that maybe there wasn't an opportunity to get at their former employer. If they return, the employer gets the additional knowledge as well," Gioia adds. ■

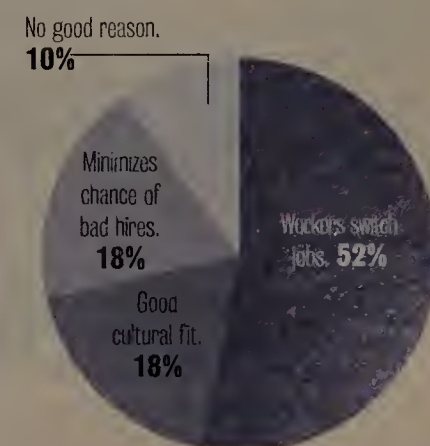
On the rebound

A 2005 survey of 100 U.S. organizations proved that more than half of employers would rehire former employees.

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What is the best reason for hiring back former employees who have left in good standing?



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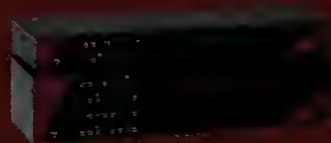
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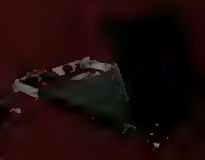
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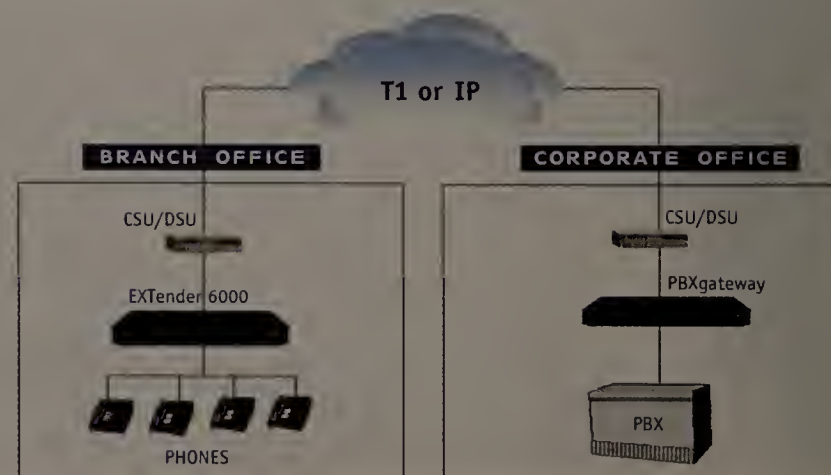
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Observer delivers WLAN mgmt. for Select Comfort

The Select Comfort® Corporation (NASDAQ: SCSS), creator of the revolutionary Sleep Number® bed, has over 2,500 employees, 375 retail outlets, and delivers net sales of \$558 million annually. For years, network administrator Christian Wilson used Observer® Suite by Network Instruments to monitor, manage, and troubleshoot the company's network.

When Select Comfort implemented an 802.11 wireless LAN, Wilson used Observer to deploy access points, load balance wireless traffic, find rogue wireless devices, and implement WLAN corporate policies.

"At first, our WLAN was created solely to support the devices used by employees managing inventory," said Wilson. "Over the years it has grown to support our corporate users as well. With Observer's many WLAN features, I can monitor utilization, watch for rogue access points, run usage reports, and perform baselining activities—improving the

performance of our wireless network."

Select Comfort first started using Observer Suite in 2002, when Wilson was looking for an alternative to

Observer's Wireless Site Survey mode offers scanning of multiple 802.11a/b/g channels displaying numerous wireless statistics, including

Observer ensured our data wasn't susceptible to hackers—I can't tell you how much that is worth.

Christian Wilson, Select Comfort

Network General's Sniffer® analyzer.

"I had used Sniffer for three years and started looking for a product that was reasonably priced with solid functionality," said Wilson. "Many features you would pay extra for with Sniffer are included with Observer. For example, wireless support is included with Observer whereas with Sniffer it was an additional cost. When you throw in the price difference, Observer wins hands down."

frame types, management frames, speeds, signal strength, signal quality, and channels in use. A convenient channel map provides a quick view of current network status. As Select Comfort's WLAN expanded, security became a concern. Fortunately, Observer offered Wilson a way to safeguard the network.

"With Observer, it's easy to find rogue access points," said Wilson. "I simply load Observer onto my laptop and walk around the building

to find which access points are transmitting. I only had six access points deployed, but Observer saw a lot more. Employees were purchasing units on their own and installing them below their desks. This was incredibly dangerous from a security point of view. Thanks to Observer, I created a new corporate security policy to help protect our network that I could easily enforce."

Observer's ability to secure Select Comfort's network traffic is the single most important benefit to Wilson.

"The knowledge and insight provided by Observer is priceless," said Wilson. "How can I quantify how much money and time we've potentially saved by locating rogue access points? Observer ensured our data wasn't susceptible to hackers—I can't tell you how much that is worth."

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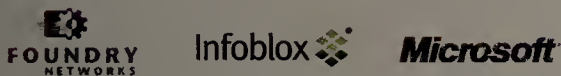
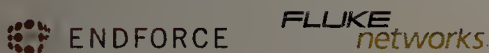
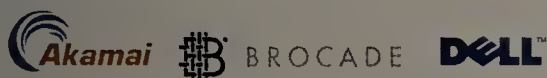
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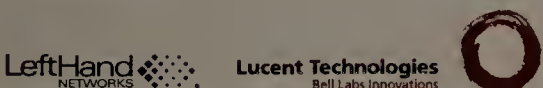
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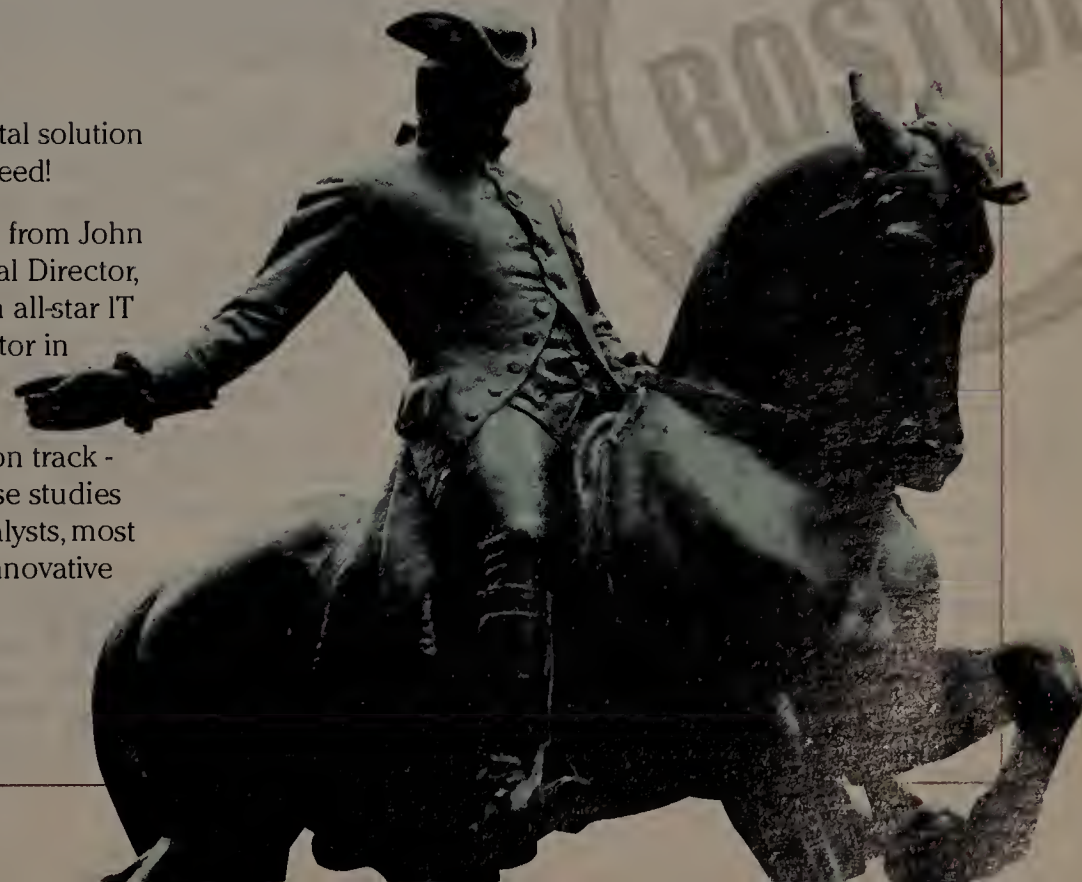
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Firewall

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and forcing Stanfield to take near superhero measures to save his security executive job as well as his family, who are taken hostage.

Identity theft doesn't seem as sexy a topic as the espionage and adultery that Hollywood tends to churn out, but there does seem to be an ongoing flirtation between big movie companies and technology.

"Every once in a while you'll see a movie that tries to talk about the state of the art of technology and point out the flaws," says Todd Dagres, general partner with Spark Capital, a venture capital firm that invests in companies that combine technology and entertainment, as well as the founder of two film and TV production companies. "Hollywood loves the downside — 'You think you're protected, but you're not' — and how technology can turn against you."

Yet Dagres points out that Warner Bros. Pictures must have realized the storyline alone might

Who are you?

Some other movies that have dealt with the concept of stolen identities:

Movie	Release date	Plot
Catch Me If You Can	2002	Leonardo DiCaprio plays a young con artist who spoofs a number of identities and makes millions by writing bad checks.
The Bourne Identity	2002	Matt Damon plays a wounded man with amnesia being chased by CIA agents as he attempts to discover his true identity.
Changing Lanes	2002	Ben Affleck plays an attorney who uses online tricks to financially ruin his nemesis, played by Samuel L. Jackson.
The Talented Mr. Ripley	1999	Matt Damon plays a man who assumes the identity of a millionaire he killed.
Face/Off	1997	John Travolta and Nicholas Cage star as an undercover agent and a criminal who literally trade faces.

not be enough draw for the average moviegoer. "You've got to have Harrison Ford in there running frantically around and turning the tables on the bad guys" to pack the theaters, he says.

Though "Firewall" is being released when news headlines about identity theft abound, it's not the first to focus on the issue (see graphic). Perhaps its most notable predecessor was the 1995 release "The Net," in which Sandra Bullock plays a software engineer whose identity was

deleted and replaced by one attached to a criminal record.

Using a computer to erase someone's existence was so far-fetched in 1995 it seemed like something that could happen only in a movie, but that's perhaps not so today.

"I do think it's appropriate for people to be concerned about identity theft, therefore it's not surprising that it has become a topic of interest," says Laura Yecies, a general manager at firewall maker Check Point. "One of our

biggest efforts has been to really educate consumers about the importance of taking the security of the Internet and their computers seriously."

It's also nice for Check Point that Hollywood named a mainstream movie after a highly technical product that the company is closely associated with. "We think it's kind of cool that this thing we work on day-to-day is really relevant to everyday people," Yecies says.

Check Point is planning company outings to see the movie and will host some sessions analyzing the film to separate the technically possible from the Hollywood hype. "We've come up with some cute ideas," of ways the company can have fun with the film, she says.

Symantec liked the idea of being associated with "Firewall" so much that it became a marketing partner with Warner Bros. for the film. The company is offering two free movie tickets to people

who buy its Norton Internet Security 2006 software through the end of April.

This is the second partnership Symantec has struck with Warner Bros. regarding a movie, though "Firewall" appears to have more in common with Symantec's business than did the first film, "Batman Begins".

"What we liked about ["Firewall"] is the main character really uses his expertise in security and his smarts to defend the bank from the bad guys," says Linda Knox, marketing program manager with Symantec.

Despite all the raised awareness that security companies hope this film creates, it may be making a mountain out of a relative molehill. According to a January 2005 report by the Better Business Bureau and Javelin Strategy & Research — a report that the Federal Trade Commission points to as the most up-to-date source on identity theft — the crime is on the decline; there were 9.3 million victims reported in 2004, down from 10.1 million in 2003.

Online identity theft isn't as big of a threat as headlines — and headlines — would make it seem, the report says. In 2004, computer-related identity crimes accounted for only 11.6% of all reported identity theft; the most frequent method was via a stolen checkbook or wallet. And in those cases in which authorities found the perpetrator, half the time it was someone the victim knew.

But try telling that to Jack Stanfield. ■

Lotusphere

continued from page 1

of the plug-ins has not been set.

The plug-ins, however, are just the first efforts of a plan to build components and hosted services that will plug social network capabilities into the core of not only Sametime but also Notes Hannover/Domino Next and WebSphere Portal 6.0. The company is using its Workplace Managed Client technology, which is common across those three platforms, to ensure those components work in all three products.

IBM/Lotus also has nearly a dozen research projects, including a handful poised to become products, for mining, cataloging and searching everyday work and sharing it with others.

On its alphaWorks emerging technology site, IBM/Lotus has made a blog tool available and will release it as a product later this year for Workplace Collaboration Services 2.6, a set of server-based collaboration tools expected to ship this fall. IBM/Lotus also is working on a similar wiki tool but has not announced when it will become a product.

In addition, the company plans to support RSS and Atom syndication-feed technology across its product line including Domino Web Access, QuickPlace, WebSphere Content Manager, Portal Document Manager and forms-based technology. The feeds also are being tapped for publish and subscribe capabilities, machine-to-machine data transfer and tracking collaborative activity.

"A lot of what we are doing now is figuring out where this all fits in. These things are not replacements for what we already have," says Duncan

Mewherter, development manager for blogs, wikis and feeds at IBM Research. Instead, he describes them as a light layer of collaboration.

For example, IBM Research's Dogear project is a centralized server where users can store, catalog and share bookmarks. It can be integrated with Google so when users do a search they get Google results from the Web and Dogear results from internal sites. The bookmarks are associated with users and ranked based on how many users have stored them and how often they are hit. A companion application called Fringe does similar organization and ranking around documents.

"I am telling them Dogear should be productized now," says Mike Gotta, an analyst with Burton Group, who describes Dogear as "people by their behavior telling you what is important. The industry has done certain software wrong because it is not designed around people's activities, and this will cause a redesign of some sharing tools."

Microsoft is adding syndication-feed support to Office 12 and has developed a wiki template for SharePoint, and its Social Computing Group at Microsoft Research is working on a project called Raindrop for group blogging and another called Wallop, which is exploring how people share media and build conversations within social networks.

IBM/Lotus users say they can already see social networking changing the landscape.

"All of this next level of technology does not have the complex user interface that desktop applications have had," says Alan Bell, principal consultant for Dominix Consulting. "This is technology for everyone." ■

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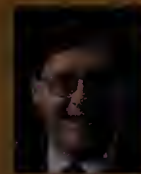
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BACKSPIN Mark Gibbs

The connected culture unconnected

If you have been following Gearhead recently you know of the trials and tribulations that have been experienced here at

Gibbs Towers with our DSL connection.

For the eight days we were offline we lived in a strange retro world where getting e-mail was again a chore, where looking up anything was no longer simple and easy. Even Mrs. Gibbs, who is proud to be disinterested in things digital, found that being offline was extremely inconvenient.

The bottom line is we need high-speed communications services. By "we" I mean our culture, and by "need" I mean that the social and business benefits of broadband communications that will make us competitive globally.

So what does broadband mean? I am firmly convinced that real broadband starts at 10Mbps. The standard DSL speed of 1.5Mbps is just a dial-up service with ambition. Until you get close to Ethernet speeds, everything is too slow for the things people want to do on the Internet.

But cost matters. My friend Tony runs a studio in Los Angeles that processes soundtracks for DVDs. The studio has a client who requires the processed audio to be FTP'd to him, so Tony started using a T-1 line and found getting the data to the client was taking 22 hours per job. As a single project could consist of 12 or more jobs and multiple

projects run side by side, there was an obvious problem.

The cost of getting suitable bandwidth was considerably more than Tony would like to spend. As the client won't accept the files on CDs, DVDs or any other media, Tony started to think creatively about a more cost-effective solution. He theorized he could find someone in South Korea who has a big pipe — South Koreans pay around \$33 for 8Mbps — and FedEx them his data and have them FTP it back to the United States! Sure, Tony's mostly joking, but isn't it crazy that South Korea has better service than us?

As important as performance and cost is, customer service is equally important, and I don't mean just having a nice person answer the phone. I mean being able to provision a working service and help you with problems.

When I upgraded to SBC Yahoo's 3Mbps Pro service, the company knew I was 15,000 feet from the central office. It turns out the Pro service gets flaky at that distance. So while TCP will ensure data delivery, the retries caused by packet loss seriously reduces throughput. In other words, it appears I upgraded to the higher speed just so I could pay more for what was the equivalent performance of the regular service!

I also think service providers should monitor their own performance, even if customers are unaware and/or don't understand the issues. It is a cruel trick to sell high-speed communications to Granny if Granny is unlikely to know

if she is getting the promised performance. Broadband providers should include service monitoring and know exactly what is being provided to a PC or gateway.

The problem is that the world has changed for the big telecom companies that are trying (albeit with limited enthusiasm) to supply broadband services. They have been used to making profit from selling a service provided over a very complex infrastructure. Although it has become less complex they still have a huge bureaucratic infrastructure along with strategies and profit goals that are pre-Internet, and they are struggling to evolve. The fact is they won't do it by themselves.

In international broadband rankings it is said the United States ranks 12th, which is pretty sad. What we need is a national networking policy. We need to encourage community networking, Wi-Fi and ISPs. We need to find a way to let the telcos succeed and provide what we need.

The policy needs to be business and consumer friendly, it needs to create a competitive market and it needs to happen soon. If it doesn't, and we don't get America online and up and running, we risk becoming uncompetitive and missing out on the social and economic benefits of being a connected culture.

Connect to backspin@gibbs.com.



NETBUZZ News, insights and oddities

Can you hear me now? . . . Not my kids

Paul McNamara

Given that the vast majority of grown-ups who might need one are already surgically attached to their cell phones, where are the device makers and wireless ser-

vice providers going to turn for future growth?

All you parents of young children need to gather round for this one. We're talking about the "tween" market, or those youngsters ages 8 through 12. . . . Yes, really.

"The tween market is currently under-penetrated compared to the overall population," writes Yankee Group analyst Marina Amoroso in a recent report intended to help vendors fix this, um, problem. "Despite a number of important challenges, it represents one of the key growth opportunities for the wireless industry."

We'll get to the challenges in a moment.

Yes, I was already aware that a teenager without a cell phone is like, duh. I've seen the TV commercials for the kiddie phones. Yet this father of three 4-year-olds was simply unprepared to grasp the idea that my little tykes might be packing their own cell phones in only a few years; or in other words, before they can reliably pack their own lunches.

Silly me.

According to Amoroso's report, 27% of tweens are already gobbling up those minutes on Mom and Dad's dime, with that number expected to double by 2010. And while 8-year-olds naturally make up the smallest slice of the tween market segment, their numbers are still astonishingly measurable, as in almost one out of every 10 today.

Fueling the trend are a combination of mass insanity and family-share plans that make adding your 8-year-old a relatively painless \$10-a-month decision — provided you don't have triplets.

Yet obstacles do remain that are preventing vendors from making even deeper inroads into the Little League set, according to Amoroso.

Parental controls on some models are not robust or easy enough to use, although Web-based versions are addressing those weaknesses. And

the phones themselves just aren't being built to suit the intended audience.

"What we expect is that they're finally going to recognize that an 8-year-old's mind-set and aspirational age is completely different than that of a 10-year-old," Amoroso says. "And what they think is cool or cute is completely different, as well."

Which, unless I'm not following along here, means your 8-year-old will require an upgrade when he hits 10. Notice I said yours, not mine.

But it's the parents who need to be sold in the final analysis. So I asked Amoroso how the vendors are going to get around curmudgeonly dads like me.

"Honestly, they aren't trying to go after dads," she says. "I don't like the stigmas that they're bringing to the market, but Disney Mobile for one is going after moms; actually, not just moms but house-makers, women who stay at home and that's all they do. Even though they call it a family share plan they expect Mom and the kids to be part of this plan and Dad to have his own personal plan or something with his business."

Something tells me Dad still gets to play a role when the bill hits the mailbox.

Amoroso insists the vendors are not being unrealistic when it comes to what they can expect from this youngish end of the market. "They're not expecting a huge per-

centage of 6, 7, 8 and 9-year-olds to go out and get cell phones, but they are expecting a much healthier percentage of 10, 11 and 12-year-olds," she says.

How did 6-year-olds get into this conversation? . . . *Get out.*

So bottom-line it for me: Are we headed toward the day when every elementary school desk comes equipped with a cell-phone pocket? Amoroso offers what will have to pass for words of caution: "There are always going to be parents drawing a line that says, 'My kid is too young for this, they can wait until they're at least 10 or 11.' "

Now that's tough love.

My cell phone is almost never on. Try buzz@nww.com.

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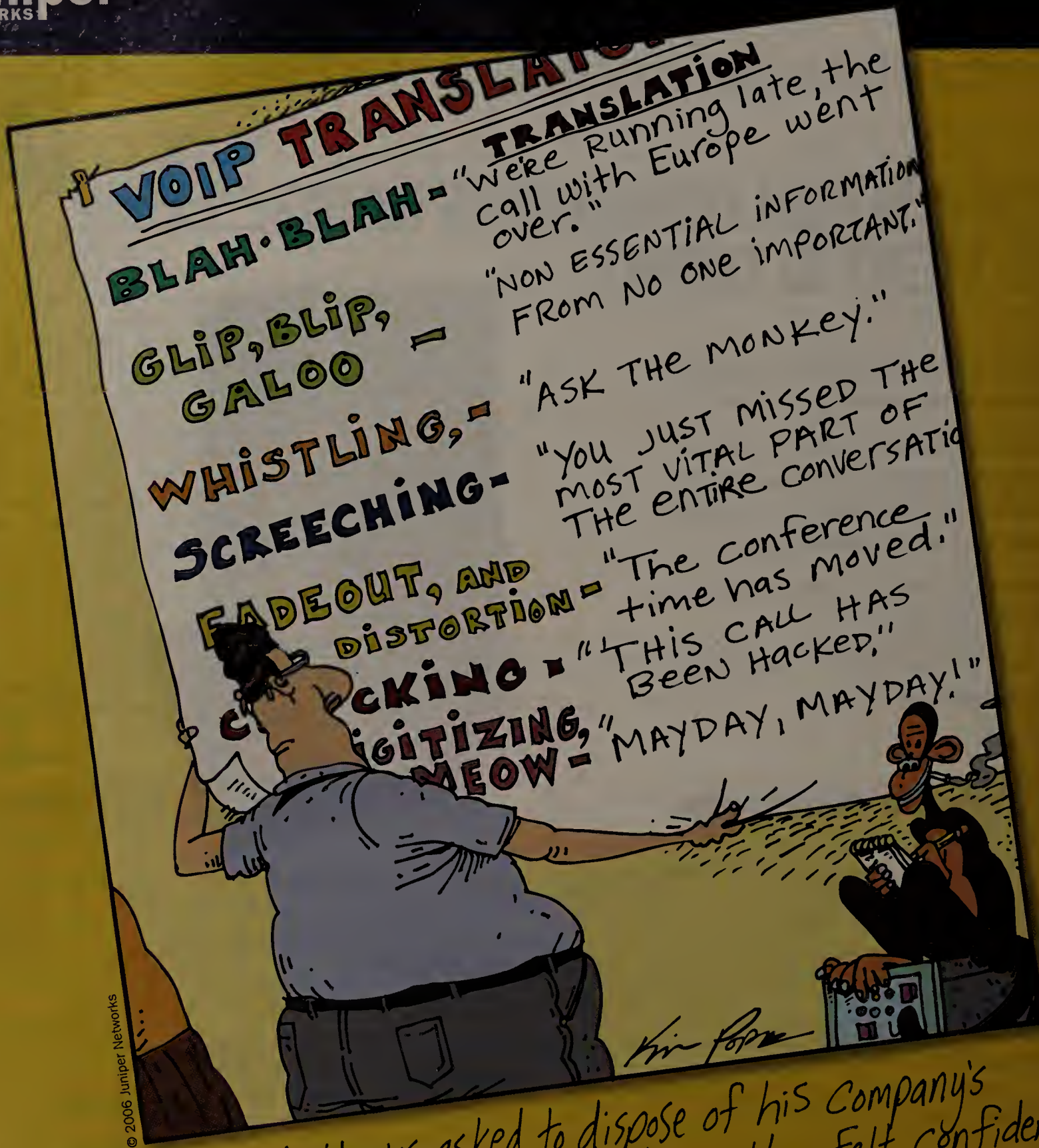
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